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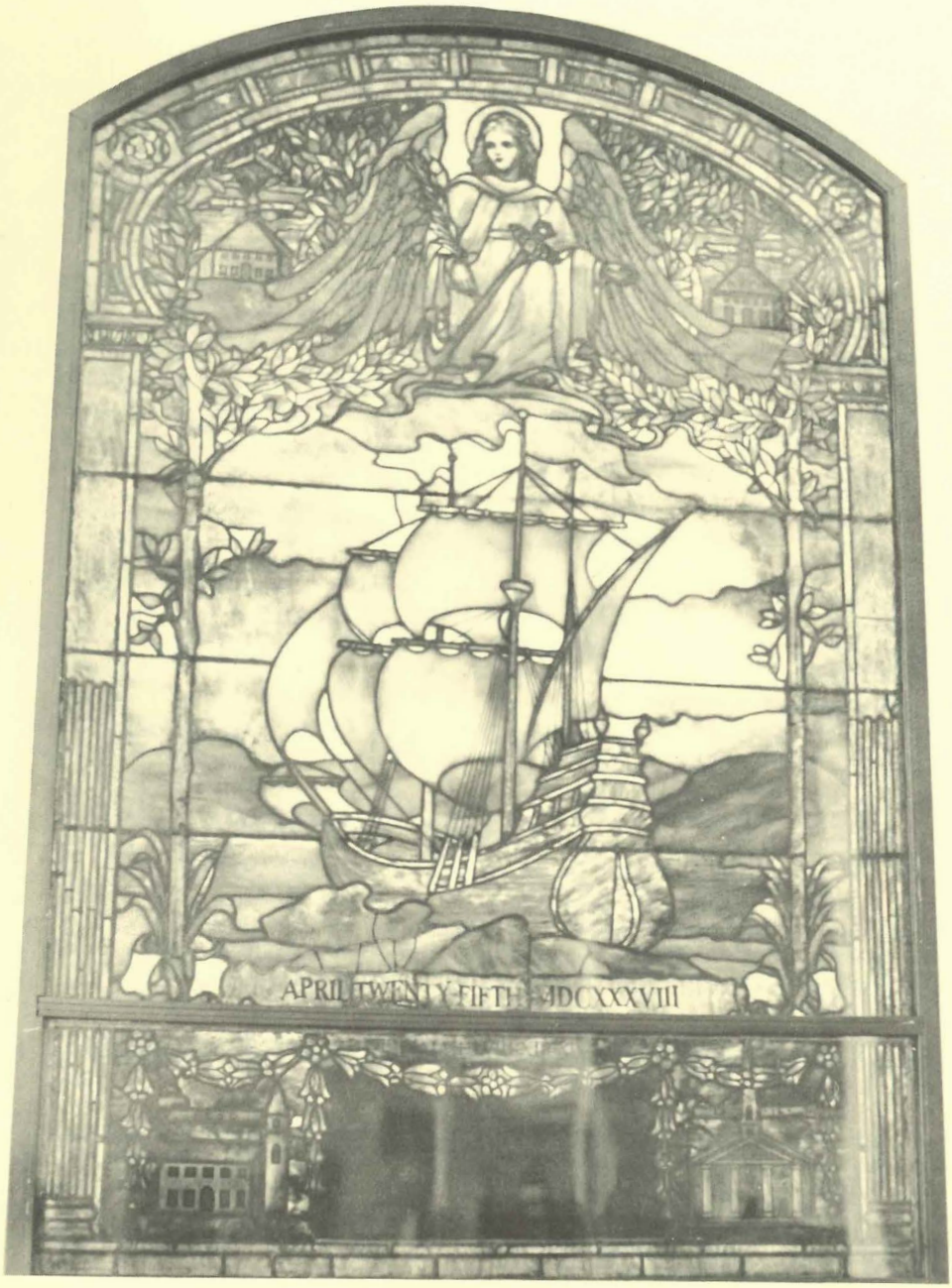

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THE NEW HAVEN COLONY HISTORICAL SOCIETY was founded in 1862 by a representative group of New Haven citizens. As stated in the Constitution adopted by the Society, revised in 1965:

"The object of the Society shall be the collection, preservation and publication of historical and genealogical matter relating to the early settlement and subsequent history, especially of New Haven and its vicinity, and incidentally of other portions of the United States."

The museum and library of the Society are open to the public. There is a fee of $2 to non-members for use of the library; the museum is open free of charge. In addition to the Whitney Avenue building, the Society owns the Pardee-Morris House at 325 Lighthouse Road, Morris Cove, New Haven. Built originally about the middle of the eighteenth century, it was burned during the British invasion in 1779. Rebuilt at once, it incorporates surviving portions of the older structure. The Pardee-Morris House is now restored and furnished appropriately and is open to the public during the summer months.

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Cover: The Ship window now in the Buley Library at Southern Connecticut State University depicts the ship *Hector* sailing into New Haven harbor with the first colonists on April 25, 1638. (Photo: Ottilia Koel)

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Peter Stuyvesant, whose stormy career as Director-General of New Netherland involved him in controversy with the New Haven Colony.

A Nest of Vipers: The Expansionist Policies of the New Haven Puritans from 1637 to 1667

by Steven H. Ward

The intense competition between the English Commonwealths and the Dutch and Swedish colonies in the New World during the seventeenth century is one of the most interesting fields in early colonial history, yet it remains nearly untouched. In comparison to Anglo-French and Anglo-Spanish relations, about which numerous studies have been written, this subject has received relatively little scholarly attention. Yet its examination can shed considerable light on the political and economic growth of seventeenth-century America. In the following pages I will concentrate on one aspect of this broader field, describing how the expansionist policies of the New Haven Puritans laid the basis for the eventual English conquest of the New Netherlands.

On June 26, 1637, a company of men and women led by the noted Puritan divine John Davenport arrived at Boston. Like the Englishmen who had preceded them, this group had migrated to New England in order to preserve God's true church and to be as a ''city on a hill'' for all men to emulate. They came intending to settle in Massachusetts Bay, and the magistrates, seeing the group as a valuable addition to the colony's strength, offered them various territories to settle. All were inland, however, and this was unacceptable to the Davenport Company. The majority of the newcomers were London merchants who desired to settle on the coast, where they could resume the trade they had left in England. In addition to their dissatisfaction with the land offered them, it is possible that they found the political climate of the Bay Colony too disturbed by the antinomian crisis.

In the spring of 1638, the Davenport congregation sailed southward toward Long Island Sound. In the middle of April, they entered the harbor at Quinnipiac, later to be renamed New Haven. The land they had chosen was claimed both

by the Dutch governor of New Netherland and by Robert Rich, earl of Warwick, a friend of Davenport. Neither party, however, had up to this point attempted any settlement of the disputed territory.

Although the Davenport group was without a proper charter, they nevertheless began their settlement. The founders of the new colony hoped to establish a conservative Puritan form of civil and ecclesiastical government, as called for by John Cotton in his *Discourse About Civil Government in a New Plantation Whose Design is Religion;* and, more important, to build a major new trade center for New England.

In the course of ''staking out a colony'' the founders of New Haven believed it would be to their advantage to extend the colony's jurisdiction southward. Such expansion was to include Long Island, the lands around the mouth of the Connecticut River, and territory surrounding Delaware Bay. In order to fulfill this expansionist policy, certain private citizens of New Haven formed an organization called the Delaware Company. Theophilus Eaton, the first governor of New Haven, and George Lamberton, one of the richest members of the colony—both formerly London merchants—were key figures in the company. Among the other members were Captain Nathaniel Turner, a veteran of the early war between Massachusetts and the Pequot Indians during the 1630s; John Davenport; and Stephen Goodyear. Although politics and religion did come to play an important part in the venture, as the years passed the Delaware Company became primarily an economic and commercial organization.

In the spring of 1641, the Delaware Company sent George Lamberton and Captain Turner southward toward Delaware Bay in order to purchase lands from the Indians. In doing so, the company was trespassing upon lands claimed by the Dutch and the Swedish. These countries, represented by the Dutch West India Company and the New Sweden Company, respectively, had purchased the same lands from the Indians years before. Further complicating the situation was the fact that the land was also claimed by another Englishman. Sir Edmund Plowden had been granted Long Island and forty leagues square of the territory on the adjacent continent in the name of Charles I on June 21, 1634. Additionally the leaders of the Bay Colony likewise laid claim to this land by virtue of a grant to the Bay Council in their charter signed by Charles I and sent to the governor of Massachusetts Bay Colony. The grant declared that all territories between the fortieth and forty-eighth parallels belonged to the Crown and through charter to the company. The fact that their claim would aggravate an already difficult situation failed to deter the Lamberton–Turner expedition.

As the Delaware Company's vessel passed Manhattan Island, Director General William Kieft of New Netherland protested to the English against any future interference on Dutch-claimed lands. He was assured by Robert Cogswell, master of the bark, that the company had no intentions of settling on any territories under Dutch jurisdiction. This apparently placated Kieft, who then permitted the English to pass. He even ordered Jan Jansen van Iplendam, commissary at Fort Nassau

on the Delaware River, to secure good relations with the English once they had settled. The English, however, reneged and began a settlement of Varkenskill within the geographical limits of the Dutch claim. During this initial venture, the New Haveners purchased lands from the Indians on the east side of the Delaware River, from Cape May to Raccoon Creek. With the addition of the English to the Delaware region, the situation thus acquired the attributes of a burgeoning international problem.

Up to this point, the Delaware Company's expedition was purely a private business venture. Returning to New Haven with colorable title, Lamberton and Turner made a report of their ''successes'' to the rest of the company, which was in turn followed by a report to the New Haven Colony's General Court on June 30, 1641:

> Whereas there was a purchase made by some particular psons of sundry plantatio^{s} in Delaware Bay, att their owne charge, for the advancement of publique good as in a way of *trade,* so also for the settling of churches and plantions in those parts, in combination with this. And there upon it was propounded w^{ther} plantations should be settled in Delaware Bay, in combination with this towne, yea or nay, and upon consideration and debate it was asserted unto by the Court, and expressed by holding up of hands.

As a result of this meeting, New Haven colony became an official sponsor of the Delaware venture. The vote in favor of support gave ''Captain Turner, the free liberty to goe to Delaware Bay for his *own* advantage and the publique good in settling affayres thereof.''

The reasoning behind the colony's decision to support the venture at this particular time is primarily of a pragmatic nature. By waiting until they had purchased lands from the Indians, the men of New Haven were now able to claim colorable legal title to the Delaware region. The General Court's support translated into greater well-being for the individual members of the organization in addition to aiding the Colony's political and economic desires. By becoming ''partners'' with the Colony, the organization was thereby guaranteed protection against both Dutch and Swedish intrigues.

Buttressed by official support, Lamberton and Captain Turner returned to the Delaware region, and on April 19, 1642, in clear violation of both Swedish and Dutch claims to the same land, purchased land at the junction of the Schuylkill and Delaware rivers opposite the Dutch at Fort Nassau. The Dutch perceived the English as a nest of ''vipers'' whose sole purpose was to destroy the trading hegemony maintained by the Dutch West India Company. In response to the English challenge, on May 15, 1642, in a meeting held at Fort Amsterdam, the New Netherland Council ''resolved and concluded for the best advantage of said Company [Dutch West India] to expel aforesaid English from the above-named Schuylkill in the quietest manner possible.''

On May 22, 1642, the council ordered Jan Jansen van Iplendam ''to repair with

one or both sloops to the Schuylkill'' regions in order to remove the recalcitrant English. In order to avoid an incident resulting in international repercussions, van Iplendam was ordered to take care so that ''the English are not injured in their personal effects.''

Based upon the New Netherland Council's orders, the Dutch seized Lamberton's vessel and physically retained both his men and their belongings. All were transported back to New Amsterdam, where they were released and permitted to return to New Haven.

The English who had settled at Varkenskill remained. While Peter Riddler commanded the Swedish, relations between the two groups were relatively amicable. The status quo, however, ended on February 15, 1643, when the Swedes replaced Riddler with Johann Printz. Printz arrived with orders that required him to bring the English at Varkenskill under Swedish supervision. Printz ordered the English to either swear allegiance to Sweden or depart. In order to illustrate to the English the sincerity of his ''request,'' Printz constructed Fort Elfsborg just below Varkenskill. This move was subsequently followed by one of the more interesting episodes in early American history.

Printz arrested Lamberton and charged him with inciting the Indians to stop trade with the Swedish. From the evidence now at hand, it appears that Printz tried to frame Lamberton in order to rid himself of the English menace once and for all. The following report by John Thickpenny, related to the New Haven General Court on August 2, 1643, is one of the more amusing tales of the period.

Thickpenny stated that Printz took John Woolen, Lamberton's interpreter, and

> making many large promises to doe very much good for him if he would butt say thatt Georg Lamberton had hyred the Indians to cutt off the Swedes, but the said J. Woolen denyed itt, then the governor drunke to him againe, and said he would make him a man, give him a plantation and build him a house, and he should not want for gold or silver, if he would but say as is said before; he would doe more for him than Eng: could, for he loved him as his owne child, butt the said John answered, thatt there was no such thing, and if he would give a house full of golde, he would not say so, and then the governor seemed to be exceeding angry . . . , the governor was much enraged and stamped with his feete.

Without proof to corroborate his charges, Printz was forced to release Lamberton on July 10, 1643, after fining him a small amount.

With the formation of the United Colonies of New England at Boston in September 1643, New Haven now hoped that its Delaware venture could gain the military and political support of all the New England colonies. Aided by the Confederation, New Haven would be able to assume full control over the Delaware region in a short period of time. At the first meeting of the Confederation, Eaton and Thomas Gregson, representatives of New Haven, complained of the treatment which their comrades had been forced to endure by the Dutch and Swedes.

The commissioners decided to investigate New Haven's complaint; they ordered John Winthrop to write both Printz and Kieft for full explanations. There is no record of Kieft's reply, but Printz did act. In January 1644, Printz permitted the English still at Varkenskill to be examined by a mixed group of Dutch, Swedes, and English. As a result of this examination, Printz was exonerated of any possible liability based upon charges leveled against him by New Haven.

The years following 1643 were peaceful and relatively quiet. New Haven was preoccupied with settling towns on Long Island and the mainland. For the time being, the colony temporarily abandoned its efforts at expanding into the Delaware region.

By 1649, the towns on the farthest borders of New Haven had been settled. Demographical expansion began to threaten the Colony's continued economic existence. On June 7, 1649, Governor Eaton wrote to Director Stuyvesant of New Netherland to inform him of New Haven's intention of establishing a colony to be situated in the Delaware Valley. Eaton wrote, ''our right there is well knowne (not only to the English) to the Dutch and Swedes and Indians'' as well. Eaton based New Haven's rights to possession on purchases made from Indians indigenous to the Delaware region: ''Wee never claimed nor doe wee desire to possesse a foote of land, to which shew can show just title, but we may neither lose nor let fall the English interest and claime in to and what we have purchased and paid for in these ptes.''

Stuyvesant replied on July 2, 1649, apologizing to Governor Eaton for his predecessor's harsh treatment of the English. He insisted, however, that any further attempts to settle on Dutch land in the Delaware Valley would be firmly resisted.

In July 1649, New Haven laid its claim to the Delaware territory before a special session of the commissioners of the United Colonies, located at Boston. As before, New Haven continued to base its claim to the lands on purchases made from the Indians in 1641 and 1642. At this point in time, the other English colonies were not in a position to sponsor their confederate's venture. The Confederacy was still too inexperienced in intercolonial affairs. Furthermore, the international situation did not lend itself to such an adventure. The commissioners decided that ''the colonies will neither protect nor owne them.'' They felt that the New Haven merchants should be left ''to theire just libbertie to dispose, improve or plant the land they have purchased in those parts or any part thereof as they shall see cause.''

Up to this time, Stuyvesant had long desired to meet with the commissioners of the United Colonies in order to negotiate a mutual defense league against the Indians. As problems with New Haven came to the fore, Winthrop suggested that the dispute concerning the Delaware Valley might also be raised and discussed. Due to the growing numbers of English attempts to settle within Dutch territory, Stuyvesant was very willing to negotiate a treaty over the disputed region.

In September 1650, the long-awaited conference materialized. Stuyvesant traveled to Hartford, where the meeting was to take place. At the meeting numerous boundary disputes between the English and Dutch were resolved. As for the Delaware situation, the commissioners responded that ''Wee the said Arbitrators or Deligates wanting sufficient light to issue and determine any thinge in the pʳmises are necessitated to leave both parties in State *quo privis* to plead and improve theire just interests at Delaware for planting or trading as they shall see cause.''

On the surface at least, this status quo provision was clearly a victory for Stuyvesant. Under the terms of the agreement, any further English expansion could be checked through negotiation. As with any such agreement, however, it was only viable so long as it was honored by both parties.

The agreement also illustrates and highlights the regionalistic nature of the problems indigenous to the New World. While most of Europe was at war during much of this period for a variety of reasons, the various colonies were generally free from such entanglements. More pressing matters, such as peaceful relations with the Indians and economic and political stability in the New World, were the major concerns of those who chose the colonies as their home.

Upon learning of the commission's decision, New Haven immediately began setting about plans to colonize the Delaware Valley. At a town meeting on December 17, 1650, a majority of the members present voted that part of the town should move to the Delaware region. On or about April 1, 1651, fifty men from New Haven colony, including Jasper Crane and Robert Seely, the leaders of the expedition, set sail for the Delaware. Upon reaching New Amsterdam, they were arrested and imprisoned. Immediately thereafter, Stuyvesant wrote to Thomas Dudley, governor of Massachusetts Bay, explaining his actions and expressing a great desire for maintaining peaceful relations with the English, as agreed between the colonies in the treaty made at Hartford in 1650. He expressed to Dudley his desires to see the matter settled through amicable means: ''But contrarye to my hopes and expectations some weekes past those of the Colloyne of New Haven sent a vessel this waye to passe by our ffort with some 50 men or thereabouts under the guidance of Robert Crane and Leift Seely and others with orders and instructions to settle down in some ptes. of the South River.''

By appealing to the more moderate Bay Colony, Stuyvesant hoped to avoid a major confrontation between his colony and the English. Upon learning of the fate of their expedition, New Haven immediately petitioned the New England Confederation, then in session at New Haven, for redress of their grievances with the Dutch. New Haven, through the voices of Crane and William Tuttle, declared that the colony's losses must be satisfied by the Dutch and that the men held at New Amsterdam be released. They further suggested that the Confederation consider more fully the colony's claims to the Delaware region.

The representatives of New Haven were clearly agitating for some sort of military reprisal against the Dutch. As with earlier pleas regarding the same topic, the

men from New Haven were met with coolness by their fellow Englishmen. The commissioners replied, ''wee think it not meete to enter into a present Ingagement against the Dutch chusing rather to suffer injuries and affronts (at least for a time) then in any respects to seem to be quicke.''

The commissioners suggested that a group of 150 men settle in the Delaware region under New Haven's authority. Stuyvesant considered the suggestion, and upon further thought, declined to accept the English offer of compromise. Stuyvesant's negative reply resulted in serious discussions among the English over the topic of war with the Dutch. Based upon the discussions at the time, military conflict seemed unavoidable. New Haven recognized the impending war as the ideal opportunity to perfect its claim to the Delaware region. According to their reckoning, a combined English assault on New Amsterdam would devastate the Dutch, leaving the New Haven adventurers easy access to the Delaware Valley.

From April 19 to June 2, 1653, the commissioners sat in session at Boston. Throughout this period, the Council was unable to agree upon a course of action. In order to alleviate the stalemate, a special commission was formed. Its members included Francis Newman of New Haven, John Leverett and William Davies of Massachusetts Bay, and Thomas Stanton of Connecticut. Under the Council's authority, they were to proceed to New Netherland and investigate the dispute. The commission returned to Boston on May 21, 1653. At the request of the Massachusetts General Court, a debate based upon the commission's findings was to be held. Theophilus Eaton, governor of New Haven, presented the prowar position, while Daniel Dennison spoke for a peaceful resolution of the matter. As a direct result of the debate, Massachusetts chose not to enter into a military conflict with the Dutch. The leaders of the Bay Colony decided that such a course was beyond the powers of the Confederation. Although New Haven insisted that such a view was in error, the leaders of the Bay Colony were adamant. Unable to proceed without the assistance and support of Massachusetts, New Haven was once again prevented from realizing its dream of establishing a settlement on the Delaware River.

In an effort to overcome the Bay Colony's intransigence, on June 21, 1653, the town of New Haven appointed John Astwood of Milford to plead their case before the Parliament in England. With the accession of Oliver Cromwell and the Puritan Parliament, the leaders of New Haven were quite sure that their cause would be recognized as just and that full support would be given their plans. Astwood was told to inform Cromwell that ''unless the Duch bee either removed or (so far at least) subjected that these colonies may be freed frm injurious affronts and secured against the dangers and mischevious effects which daily grow upon them by their plotting with the Indians and furnishing them with armes against the English,'' the Puritan Commonwealths of New England would be in grave danger of collapsing.

As a result of Astwood's pleas, Cromwell ordered Captain John Leverett (then in England) and Major Robert Sedgwick to accompany a contingent of troops to

America, in order to subdue New Netherland. On June 5, 1654, the soldiers, under the combined command of Leverett and Sedgwick, arrived at Boston harbor.

Just as the plans for war were being finalized, word arrived that the Netherlands and England had entered into a peace treaty on April 22, 1654. As a result of ''the peace now concluded betwixte England and Holland,'' the New Haven General Court decided that ''the intended war with the Duch'' should be abandoned.

Undaunted by this setback, the men of New Haven continued to hold steadfast in their desires to establish a settlement in the Delaware Valley. Their new approach centered upon the bad feelings between the Dutch and the Swedish. In an effort to use this mutual dislike to their own advantage, on July 6, 1654, Governor Eaton wrote to Director General Rising of New Sweden informing him of New Haven's claim to certain Delaware lands. Eaton suggested that the Swedes and the English enter into a joint trading and planting venture in the disputed region. The director general viewed the English suggestion with disdain. He had no desire to see a third party become involved in an already complicated matter. Undeterred, a small group of New Haven citizens led by Francis Newman and Samuel Eaton planned to migrate to the Delaware Valley in late 1655. This attempt met with failure.

During late summer and early fall of 1655, General Stuyvesant led a well-armed fleet against the Swedish settlements in America. On September 25, 1655, he seized Fort Christina and the entire South River. Following the Dutch action of 1655, New Haven found its staunchest opponent firmly entrenched in the Delaware Valley. Although the government in England sympathized with New Haven's plight, international events were not yet conducive to an English conquest of the Dutch.

The restoration of the Stuart line in 1660 radically changed the order of things for the colonies in America. The colonies no longer enjoyed the support of a politically and religiously sympathetic ruler. New Haven was the most vulnerable colony to this turn of events. Though the settlement had long insisted upon the legality of its status as a colony, the issue had never been formally decided. From a legal point of view, the settlement was without official status as a colony. This, coupled with the fact that the colony had helped hide Whalley and Goffe, caused grave consternation among the rulers of New Haven. It was feared that the new king would exact some sort of retribution from the colony. On April 29, 1661, certain members of New Haven approached Governor Stuyvesant in order to seek refuge under Dutch jurisdiction. Negotiations over the matter continued through May of 1662. By June, however, the plans to move the entire colony to the Delaware Valley came under reevaluation. There was a general fear that such an action would further aggravate the already strained relations between the colony and the Crown. In addition, there was a general distrust of the Dutch.

Unfortunately for New Haven, by 1662 events beyond the control of the colony's leaders precluded them from trying to maintain the status quo. By 1664,

the entire Commonwealth of New Haven had become incorporated into Connecticut. Also during this period, the English successfully attacked and subdued New Netherland, thus fulfilling New Haven's dream of some twenty years—an English colony located on the Delaware.

Prior to the actual conquest of New Netherland, the citizens of New Haven, on January 7, 1663, decided that Captain Scott, an agent of the Duke of York, should be approached about ''getting a patent for Delaware.'' The Duke of York was to be the new English proprietor over New Netherland. On February 10, 1665, York and his advisors chose Phillip Carteret to be governor of the New Jersey province. In the year 1666 a group of New Haven citizens, under the leadership of Robert Treat, migrated to the Delaware Valley and established the town of Passaic, later to be renamed New Ark. In October 1667, Treat and his fellow settlers attempted to persuade John Davenport to join the group as their spiritual leader. Although he had long been interested in such a venture, he was by this time too old and far too busy with other ecclesiastical matters.

The incorporation of New Haven into Connecticut, coupled with the English victory over the Dutch, ended the colony's attempts to establish a commercial empire in the New World. Henceforth, New Haven would continue to be tied to the soil its original founders first traversed upon. Agricultural rather than commercial considerations would thereafter be the primary economic staple of the ex-colony.

The failure of New Haven to establish a commercial hegemony in the New World, however, stands for more than just another historical anecdote. In its efforts to stake out a colony and establish a colony-wide commercial hegemony in the New World, New Haven laid the groundwork for the eventual conquest of New Sweden and New Netherland. New Haven, through its obstinance and example, illustrated to the other English colonies the political and economic importance of extending English jurisdiction over the entire Eastern Atlantic Coast seaboard. The New Haveners' continued attempts to settle in the Delaware Valley illustrated to their fellow Englishmen the critical importance of commercial and political cohesion among the English colonies located in the New World; a cohesion that would, some one hundred years hence, come to fruition.

STEVEN H. WARD, a corporate attorney by profession, has a long-standing interest in Puritan history, particularly that dealing with the New Haven Colony, which was inspired by one of his undergraduate professors, Francis J. Bremer.

BIBLIOGRAPHY

Primary Sources

Calder, Isabel MacBeath, ed. *Letters of John Davenport Puritan Divine.* New Haven: Yale Univ. Press, 1937.

Dexter, Franklin B., ed. *Ancient Town Records.* New Haven Town Records, 1649–1662. New Haven: New Haven Colony Historical Society, 1917.

Fernow, B., ed. *Documents Relative to the Colonial History of New York (1853–1883). Vol. XIII Documents Relating to the History of the Dutch and Swedish Settlements on the Delaware River.* Albany: Weed, Parsons and Company, 1877.
Hoadly, Charles J., ed. *Records of the Colony and Plantation of New Haven from 1638 to 1649.* Hartford: Case, Tiffany and Company, 1857.
_____. *Records of the Colony or Jurisdiction of New Haven from May, 1653, to the Union.* Hartford: Case, Lockwood and Company, 1857.

Secondary Sources

Calder, Isabel MacBeath. *The New Haven Colony.* New Haven: Yale Univ. Press, 1934.
Cohen, Ronald. "Colonial Leviathan, New England Foreign Affairs in the Seventeenth Century." Ph.D. diss., Univ. of Minnesota, 1967.
_____. "The Hartford Treaty of 1650: Anglo-Dutch Cooperation in the Seventeenth Century." *New York Historical Society Quarterly* 53 (1969): 311–32.
Johnson, Amandus. *The Swedish Settlements on the Delaware, 1638–1644.* New York: D. Appleton & Company, 1911.
Kessler, Henry Howard, and Eugene Rachlis. *Peter Stuyvesant and His New York.* New York: Random House, 1959.
Kidder, Frederic. *The Swedes in the Delaware and their Intercourse with New England.* Boston: D. Clapp & Son, 1874.
Levermore, Charles H. *The Republic of New Haven.* Baltimore: Johns Hopkins University, 1886.
Savelle, Max. *The Origins of American Diplomacy: The International History of Anglo-America, 1492–1763.* New York: Macmillan, 1967.
Ward, Harry M. *The United Colonies of New England, 1643–1690.* New York: Vantage Press, 1961.
Weslager, C. A. *The English on the Delaware, 1610–1682.* New Brunswick, N.J.: Rutgers Univ. Press, 1967.

Remarks at Wrexham: An Address Delivered in St. Giles Parish Church, Wrexham, Wales, on July 11, 1983

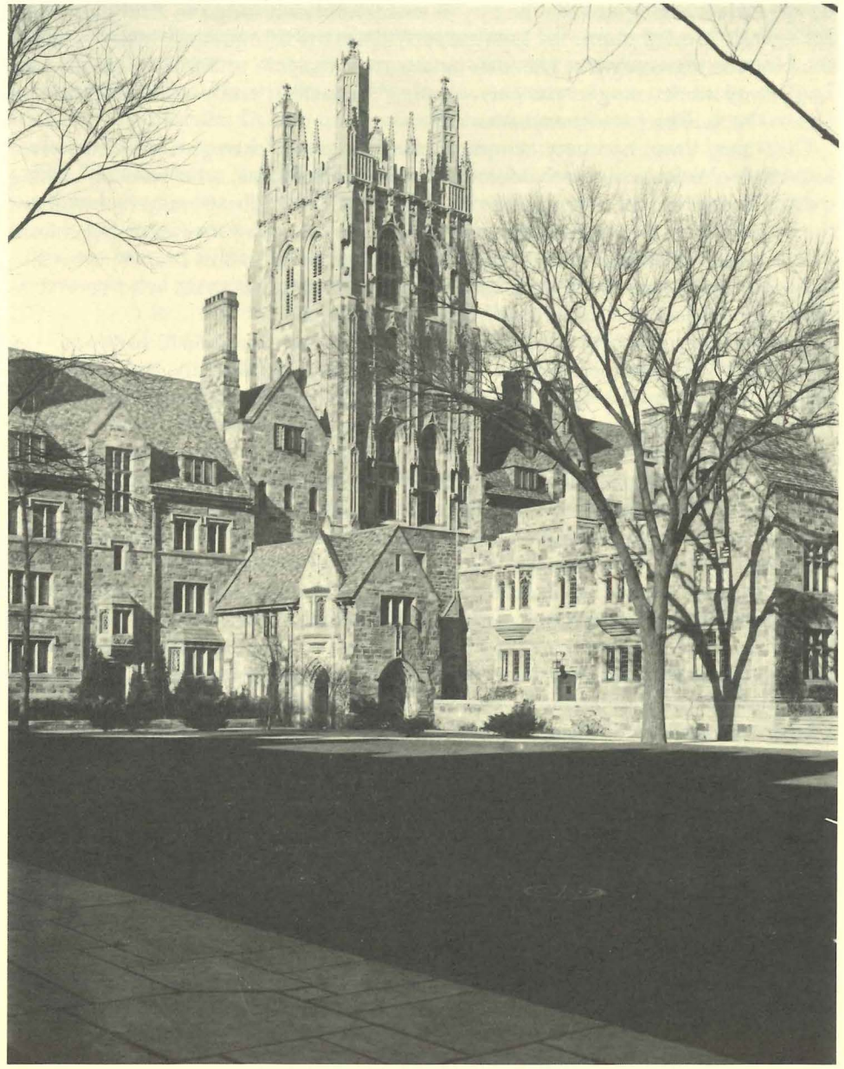
by Floyd M. Shumway

We are here today upon the 265th anniversary of the naming of Yale College to celebrate Elihu Yale, for whom our college was named. We have come into a lovely countryside and have been given a wonderfully hearty welcome. It is a particular pleasure to be invited to gather here in this venerable and magnificent parish church to share music which has such special meaning for us and to renew the strong bonds of sentiment and affection which unite our institution with the Borough of Wrexham, Denbighshire, where that ancient family, the Yales of Wales, had their origins.

Anyone doubting that the Yales are indeed an ancient family has only to look at a document called "The Royal and Noble Heritage of Elihu Yale," which I have carried with me all through this trip in case the question ever came up. Most of it consists of a genealogical chart, and when the whole business is unfolded and spread out it is about three feet high and four feet wide.

There before you, if you can read the tiny print, are some of history's liveliest characters, dating back to the fifth century A.D. and representing several nationalities. There is Griffith ap Conan, the last man to have the title king of Wales, who died in 1137. His descendant Lowie was the niece and heiress of Owen ap Griffith Vychan, lord of Glyndwrdry, whom Shakespeare, no master of Welsh pronunciation, called Owen Glendower. Up toward the top of the chart is Charlemagne, king of France, who had himself crowned Emperor of the West on Christmas Day in Rome in the year 800. Somewhat further down you will find Rollo, the Viking adventurer who fought his way onto the French mainland and was recognized in 912 as the first duke of Normandy. There is Dominus Otho Gherardini, a Florentine who charmed his way through the Norman court and then settled in England in 1057, where King Edward the Confessor was so dazzled

St. Giles Parish Church, the handsome Gothic edifice which dominates the skyline of Wrexham, Wales.



Wrexham Tower at Yale University was designed by James Gamble Rogers to reflect the spirit of St. Giles Parish Church in Wrexham, England, where Elihu Yale is buried.

by the stylish immigrant that he forced vast possessions on him. And there, too, is Roger de Montgomery, the greatest of William the Conqueror's lords, who led the Norman right wing at Hastings and turned the tide of battle by slaying the English giant in single combat, earning himself thereby the earldoms of Shrewsbury, Chichester, and Arundel.

The Yales, then, had very complicated and glamorous origins, but they were undeniably Welsh and closely identified with Denbighshire, where we are visiting today. Their principal seat was Plas yn Yale, only a few miles from here, but about the beginning of the seventeenth century a cadet branch of the family purchased Plas Grono, which is also near Wrexham. The founder of this branch, who also owned Erdigg, was Dr. David Yale, an important churchman who served as chancellor of Chester Cathedral from 1587 to 1624.

Thomas Yale, the son of Dr. David, was married about 1612 to Anne, the daughter of George Lloyd, the bishop of Chester, and they lived thereafter in Chester and at the family home, Plas Grono. Thomas died about 1619, leaving his widow with three children, David, Ann, and Thomas, Jr.

A few years later Anne Lloyd Yale became the wife of Theophilus Eaton, a wealthy London merchant. It was a fatally illogical marriage, because Anne, the daughter of the bishop of the Church of England, had become the wife of a very advanced Puritan. Eaton's friend and minister, John Davenport, shared his views to such an extent that he had to flee to Holland when Archbishop Laud started a campaign against nonconformists. Unable to obtain a satisfactory pastorate on the Continent, Davenport returned to England determined to settle in the New World. Eaton decided to go with him, and together they organized a party that left England in 1637 and founded New Haven the following spring. Among them were Anne's three children by her first husband, all now young adults.

For Anne and most of her Yale offspring the migration was a very unsatisfactory experience. Anne and her husband became increasingly incompatible, and it gradually became evident that she was not in agreement with the tenets of Puritanism. Her position as wife of the governor and the richest man in the colony should have saved her, but it did not. Davenport engineered her excommunication in 1645 while her husband stood by quietly, doing absolutely nothing to help her. She stayed on in New Haven, because there was really no available alternative, but a few weeks after Eaton died in 1658 Anne packed up and went home, never to return.

Two of her children by Thomas Yale had preceded her by seven years. David's unwillingness to accept Puritanism made him uneasy in New Haven and got him in trouble in Boston, to which he moved in 1641. He married in the latter place, and by the time he and his wife returned to England they had an infant son named Elihu. David's sister Ann and her husband, Edward Hopkins, went back at the same time. Only Thomas Yale, Jr., stayed permanently in America, and it took him almost ten years to achieve church membership in New Haven, so even he may have been a bit short of Puritan zeal.

Young Elihu Yale grew up in London, where he attended a school run by the noted William Dugard. At the age of twenty-four he entered the service of the East India Co. and rose through the ranks until he became governor of Fort Saint George at Madras. He retired in 1699 after twenty-seven years abroad and came home to Great Britain. During those years he had acquired very substantial wealth, and he was thus one of the first of that classic eighteenth-century type, the so-called Nabobs. Elihu Yale built himself a suitable London mansion and divided his time between the city and Plas Grono. He died in 1721 and is buried outside of this house of worship.

We are here in Wales today because of Elihu Yale's important generosity to an obscure and struggling college in a town he had never seen. The Collegiate School, founded in 1701, was planted originally in Saybrook, but it languished in that out-of-the way place, and it was recognized that it had to be moved to one of Connecticut's larger and more centrally located communities. After a lot of bitter debate a decision was made in 1716 to bring it to New Haven. Meanwhile Jeremiah Dummer, the Connecticut Colony's agent in London, and Cotton Mather, the renowned New England divine, combined to arouse Yale's interest in the young institution, and in spite of the fact that he was a staunch member of the Church of England, he made gifts in the amount of £1,162 to the Congregational school in the town where his father had once lived. News of this donation, the biggest private gift received by the college during its first 127 years, reached New Haven in September 1718, just before graduation exercises and the formal opening of the new building. In gratitude the trustees voted to name the edifice Yale College.

His act of simple generosity provided Elihu Yale a very special kind of immortality, because the feeble school to which he extended early assistance has grown into a great university of worldwide reputation. Its sons and daughters regard the homeland of the Yales with a very real affection, and we come here today, as other groups have come before us, to pay our respects to this fine city and shire. Our visit has an even greater significance for me. I am a descendant of Thomas Yale, Jr., the one member of the family who stayed on in New England, and I feel that in a way I am coming home.

FLOYD M. SHUMWAY is both an urban and a colonial historian and has done considerable writing on New Haven's earliest years.

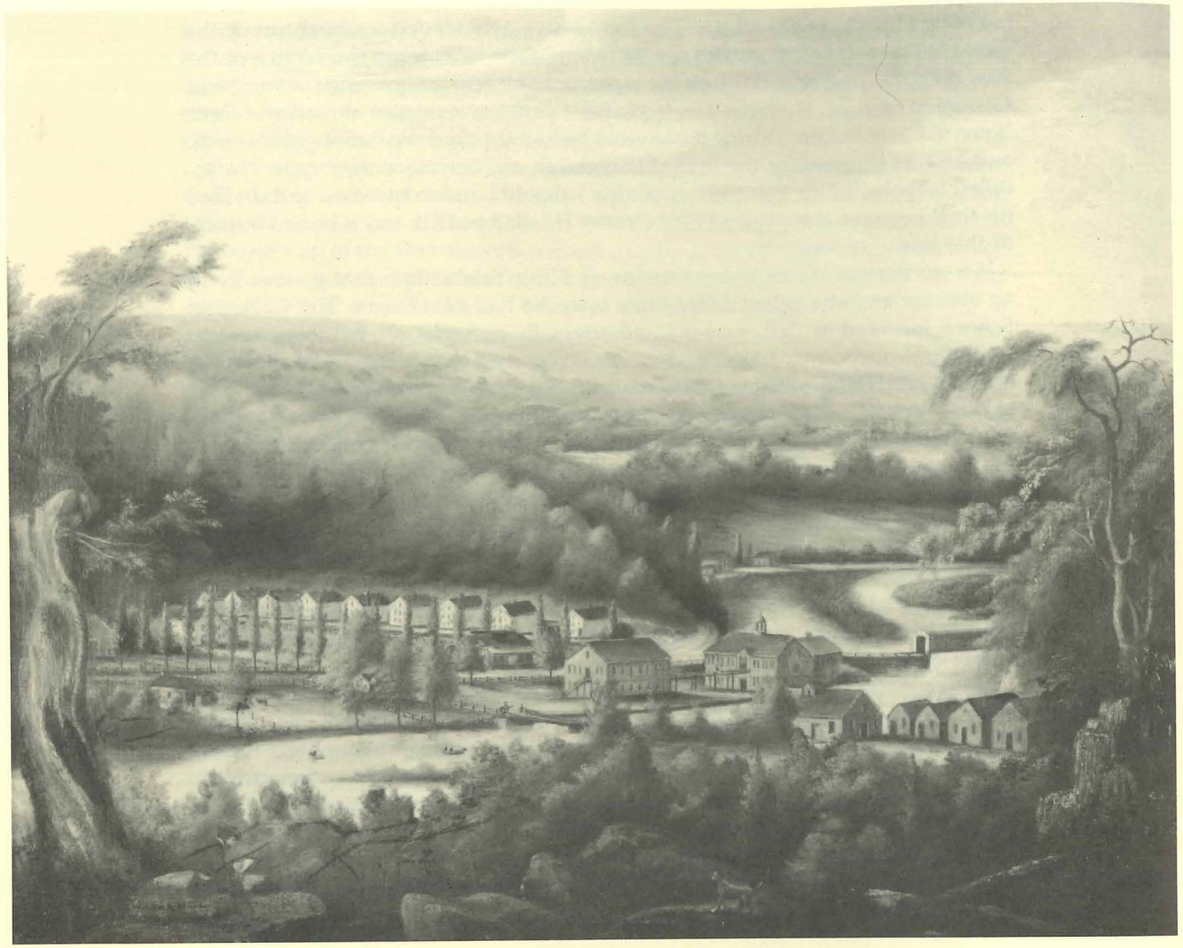


Figure 1. ''The Eli Whitney Gun Factory'' by William Giles Munson, oil on canvas, 1826–28. Yale University Art Gallery, Mabel Brady Garvan Collection.

This view, looking north, shows two large buildings at the center: the gunstocking shop on the left and the filing and machine shop (with belfry) on the right. The largest building on the near side of the river was the forge shop, with a row of four fuel storage sheds nearby, one of which survives today. At the far left of the picture, the 1816 barn is partly visible, with the boardinghouse to the right, behind the row of poplars. Both of these buildings survive. Nine houses for married workers stood in a row along the street now known as Armory Street. The poplar-lined Hartford Turnpike (present-day Whitney Avenue) crossed the millpond at the middle right by a covered lattice-truss bridge patented by Ithiel Town in 1820 and constructed at this site in 1823. Today a replica of it spans Mill River at the site of the footbridge at the center of the picture, whose stonework survives.

Eli Whitney's Armory: Myth, Machines, and Material Evidence

by Carolyn C. Cooper

The Interrelation of Industrial Archaeology and Technological History

Industrial archaeology provides information for technological history and vice versa. The time period that industrial archaeologists pay most attention to—the Industrial Revolution—is relatively recent, so it might be expected that the historians would have plenty of information already. But the written historical record is woefully inadequate concerning the technological changes that took place in that period. While the participants in the industrial revolution of nineteenth-century America *wrought* much in their lifetime, they *wrote* little about what they were actually doing on the job during that important period of transition from hand craftsmanship to machine manufacturing technology. They left the writing to more or less uninformed and more or less casual observers, who tended to indulge in glowing generalities instead of specifics. So in the absence of a good written record it becomes necessary to look at the material evidence provided by old industrial sites and old industrial products to try to reconstruct what actually went on at those sites. Conversely, to understand such a site, it is necessary to consult what written records there are about it. Eli Whitney's armory is an example of an historic industrial site that both asks for and provides explanations of what happened there in the past.

A Brief History of Eli Whitney and his Armory

The bare chronological facts about the armory site are easy enough to find in the written record. Located at the first mill seat, or water privilege, up the Mill River from the harbor, it was the site of New Haven's first gristmill in the seventeenth century, which explains the old millstones that are leaning against the present-day dam. Hence there was already a low dam there when Eli Whitney bought

the site in 1798; he had to repair it, but it remained only six or seven feet high. Today's dam is thirty-five feet high.

Eli Whitney was a Massachusetts farm boy born in 1765 who attended Yale University in his twenties, graduated in 1792, and traveled to Georgia to seek employment; while visiting at a plantation owned by the widow of Revolutionary War hero General Nathanael Greene, young Whitney invented the cotton gin. He patented it and returned to New Haven to manufacture cotton gins, setting up his workshop at the corner of present-day Wooster and Chestnut streets. The demand for cotton gins soared, for the new machine enabled planters to grow and sell cotton of a type that was previously uneconomical: the short-staple ''greenseed,'' or upland, cotton. Unfortunately for Eli Whitney, the demand outstripped his capacity both to produce them in sufficient quantity and to protect his patent rights through lawsuits. Since it was fairly easy to build a cotton gin once you had seen one, the Southerners did so, without paying Mr. Whitney for his invention. By 1798 he was deep enough in debt to be looking for another way to pay his lawyers' bills. To recover financially, he turned to musket-making for the U.S. federal government, which needed more flintlock muskets than could be produced at its newly established armories in Springfield, Massachusetts, and Harper's Ferry, Virginia. Eli Whitney received a contract in 1798 to make 10,000 stands of small arms within two years, but it actually took him ten years to deliver them all. Thereafter he made flintlock muskets for state militias and for the federal government again by contracts he obtained in 1812 and in 1822. He became a prosperous citizen of New Haven. In 1816, at the age of fifty-one, he married a younger New Haven woman, the granddaughter of minister Jonathan Edwards. They had three daughters and one son, also named Eli Whitney, who was born in 1820.

Eli Whitney, Sr., died in 1825, leaving the armory in the charge of two of his nephews, Philos and Eli Whitney Blake, who continued to produce military small arms until 1835, when they moved to Westville and set up their own hardware factory there. The Whitneyville armory, under the management of estate trustees James Goodrich and Henry W. Edwards, continued producing flintlock muskets on government contract until 1842, when Eli Whitney, Jr., came of age, graduated from Princeton University, and took over management of the armory. Young Whitney hired the master armorer away from the U.S. Armory at Springfield, and he advised him how to retool the Whitney Armory for the U.S. contract percussion musket of 1842. After making the first 1,000 Colt-Walker revolvers on contract to Samuel Colt in 1847, Whitney, Jr., began in the 1850s to produce both handguns and long arms for the civilian as well as the military market. Eli Whitney, Jr.'s, management lasted forty-six years until 1888, when he sold the firm's patents and machinery and leased the site to his New Haven competitor, Winchester's. Like his father, Whitney, Jr., was a prosperous citizen of New Haven; in 1860 he built the high dam that stands at the site today—to provide New Haven's first water supply system as well as to increase waterpower for his factory—and helped

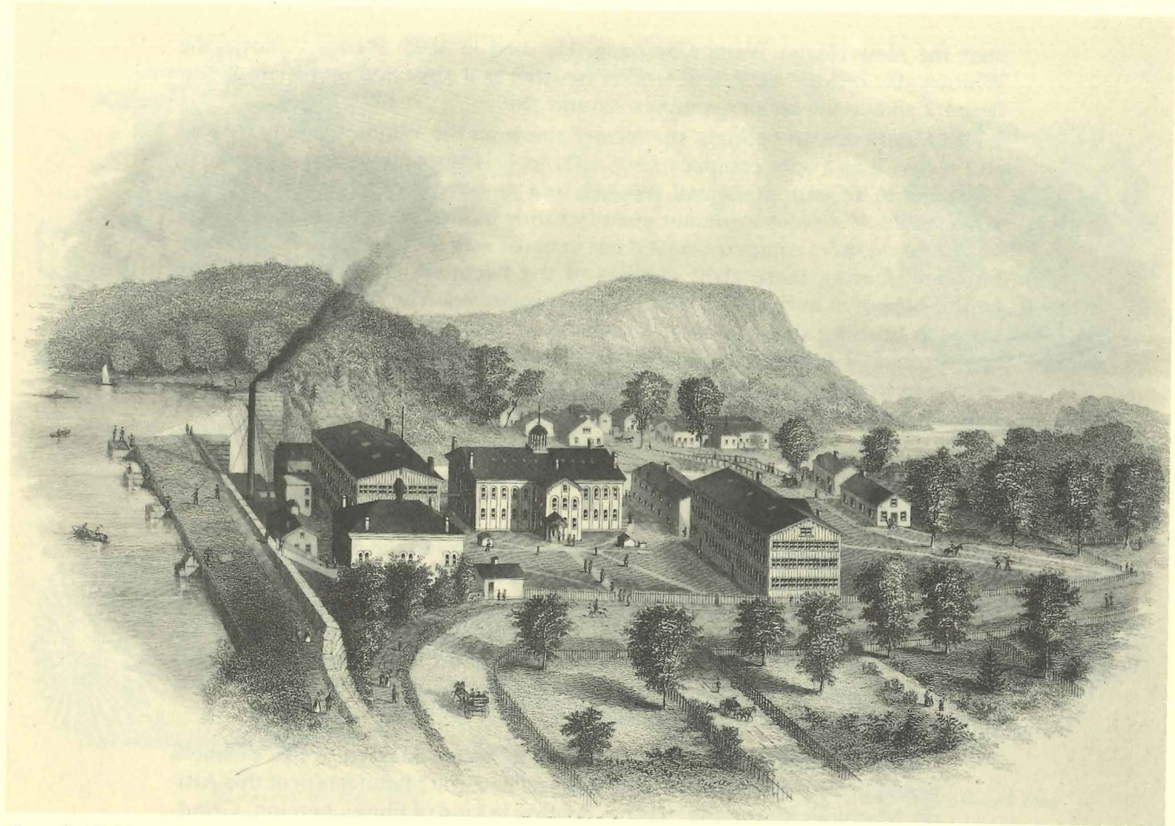


Figure 2. ''Whitney Armory,'' Van Slyke engraving, c. 1875.

The factory site between Whitney Avenue and the Mill River was completely changed by Eli Whitney, Jr., from the site as shown in Figure 1. This view toward the southeast shows the high dam erected in 1860 to form Lake Whitney at the left. The water company's pump house, topped by a cupola, is near the dam. Behind it, the large building to the right of the engine room (with smokestack) was built in 1860 for machine work and gunstock-making. The central main armory building with belfry was also built in 1860. The large building ending at Whitney Avenue was for assembling and finishing the guns; the building behind it was for making boxes and storing patterns as well as for browning the guns. The buildings in the background beyond the river include the foundry on the right and the forge shop on the left of the bridge.

start the New Haven Water Company. He died in 1895. Figure 1 shows the Whitneyville factory, farm, and worker housing as it appeared in the late 1820s; figure 2 shows the factory complex around 1875.

The water company bought the factory site from the Whitney family in 1903 and leased it to a wire company from 1904 to 1914, to a stove manufacturer in 1915, and to an entrepreneurial research and development laboratory in 1918, which in the 1930s also went into manufacturing industrial ceramics. In 1979 the industrial ceramics company moved out to make way for the future Eli Whitney Museum. During these eight decades of the twentieth century, most of the buildings shown in figures 1 and 2 have disappeared. The museum is now engaged in learning about the site in order to tell what went on there during the ninety years of America's industrial revolution during which the Whitney Armory was in operation. To learn about what happened at the Whitney Armory requires both historical and archaeological research.

The Eli Whitney Myth

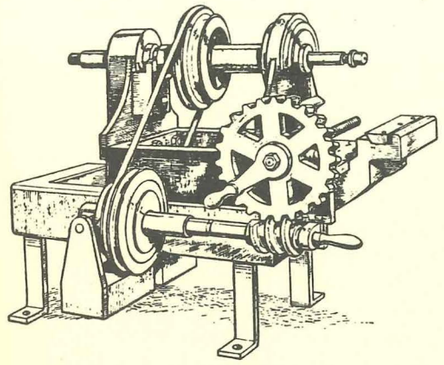
It is the job of archaeologists as well as historians to try to separate fact from fancy on the basis of hard evidence—material evidence on the one hand and documentary evidence on the other. In the case of Eli Whitney, Sr., documentary evidence about how he actually manufactured his muskets is virtually nonexistent. After his difficulties with the cotton gin patent, he neither patented his machines and methods nor wrote about them except in general terms. In his first letter on the subject of making muskets, in 1798, he wrote only

> I am persuaded that Machinery moved by water adapted to this Business would greatly diminish the labor and facilitate the Manufacture of this Article. Machines for forging, rolling, floating [a kind of filing], boreing, Grinding, Polishing etc. may all be made use of to advantage. [1]

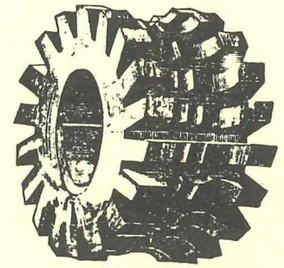
A year later he wrote that he was aiming to

> form the tools so the tools themselves shall fashion the work and give to every part its just proportion—which when once accomplished, will give expedition, uniformity, and exactness to the whole.... The tools which I contemplate are similar to an engraving on copper plate from which may be taken a great number of impressions perceptibly alike. [2]

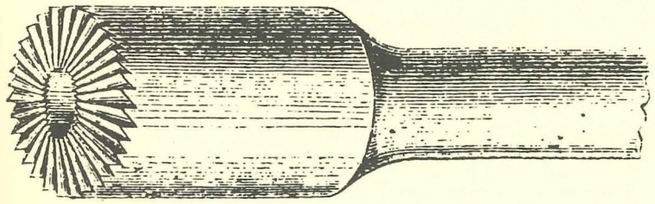
It is clear, then, that he had the idea and intention of making his muskets of parts that his machines, or "tools," would shape so as to be "perceptibly alike," or uniform, but hadn't yet done so. Did he succeed in this intention? The most detailed eyewitness account that we have of the first Eli Whitney's factory was written two years later, in the autumn of 1801. His ten-year-old nephew Philos wrote home that he had seen



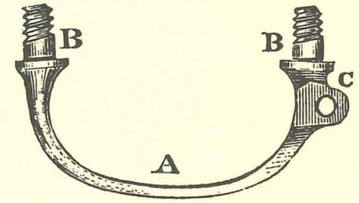
(a) Whitneyville Milling Machine



(b) Milling Cutter



(c) Hollow Milling Cutter



(d) Trigger-Guard Bow

Figure 3. Milling machine, two types of milling cutters, and a trigger-guard bow.

The Whitneyville milling machine (a), now on exhibit at the New Haven Colony Historical Society, is acknowledged as the oldest surviving milling machine, but material and documentary evidence imply that Eli Whitney, Sr., neither made nor used it. Milling cutters of the type shown at (b) would be suitable for use in this machine, but those of type (c) would not. Gun parts made at the Whitney Armory before Eli Whitney, Sr.'s, death in 1825 show tool marks made by type (c) cutters but not type (b). A trigger guard bow, for instance, shown at (d), would require the use of a hollow mill (c) to shape its ends (B,B).

> a driling machine and a boureing machine to bour berels and a screw machine and too great large buildings, one nother shop and a stocking shop to stocking guns in, a blacksmith shop and a trip hammer shop and five hundred guns done.[3]

As documentary evidence this does not go far in helping us to separate fact from fancy. The view in figure 1, painted not long after Eli Whitney's death, cannot help much, either. It shows the two "great large buildings" that Philos mentioned, but of course not the drilling, boring, or screw machine—nor that trip-hammer—inside the buildings.

This extreme scarcity of hard documentary evidence, including pictorial evidence, about Eli Whitney's machines allowed for more than a century's accumulation of fancy about his achievements at the armory in its first twenty-seven years. He became a symbol more than an actual person—the prototypical ingenious Yankee who was credited with having created single-handedly the manufacturing technology called the uniformity system or the American system. By the 1850s the machines and methods that made up the American system of manufactures were recognizably in operation to produce and assemble interchangeable parts at the U.S. Armory at Springfield, Massachusetts, and at some private factories for making small arms. Some factories were using such machines and methods to produce other mechanisms like clocks and watches; a few were beginning to make sewing machines. The system depended not only on precise machine tools but also on control of production variance by inspection of the parts with standard gauges. The British government was so impressed by some of the American manufactured goods on display at the Great Exhibition in 1851 that they sent commissioners over to observe the system and to buy machinery for the new armory they were setting up on the American system at Enfield, outside London. In the United States, this system spread in the second half of the nineteenth century and led to mass production in the twentieth.

Although the American system of manufactures, as we have seen, was not the achievement of any one person, Eli Whitney became the legendary figure who was given the credit. Here is one version of the Whitney legend, which appeared in 1905 in *Connecticut Magazine:*

> While success eventually crowned the labors of this dauntless man, he met unforeseen obstacles which would have completely discouraged a less determined person.... Instead of two years, it took eight to complete the contract. In all that time, however, the government never lost confidence in Whitney, and at the end of that time the finest armory in the world for the fabrication of firearms stood on the banks of Mill river. His machinery and tools were the nearest to perfection in existence. For the first time in the history of the world guns were made whose parts gauged exactly alike, and today that same method of manufacture is followed throughout civilization; not alone in the manufacture of firearms, but in the fabrication of every article that finds its way into the hands of the people through the assembling room. It roars in the beat of wheels rushing over tracks of steel at a mile a minute; it is proclaimed in the flash and rending crash of engines of war hurling metal bolts whose every part is built to gauge . . . in the pulsation of the horseless carriage sweeping along the way, and in instruments of science, art and song is the genius of the great Whitney proclaimed.[4]

Allowing a little extra color for the local enthusiasm—the writer lived in Hamden—this is about standard for the larger-than-life picture that was built up to portray Eli Whitney as the progenitor of modern manufacturing industry. In that picture four ideas can be distinguished: (1) that Whitney was the *first* to think of manufacturing by assembly of interchangeable parts, (2) that he actually achieved a production system at Whitney Armory that produced interchangeable parts for firearms, (3) that he did so by devising and using machines of advanced design, including specifically the milling machine, and (4) that other manufacturers used *his* system for musket production as a model for producing other mechanisms such as clocks, sewing machines, typewriters, farm machinery, bicycles, and eventually automobiles.

These ideas were repeated in American history textbooks during the first half of the present century and incorporated unchallenged into two well-documented biographies of Eli Whitney in the 1950s.[5] The identification of Eli Whitney as the inventor of the first milling machine was seemingly proved in 1912 by the discovery of the machine itself, stored in the hayloft of the old Whitney barn. Here was material evidence indeed. Joseph Wickham Roe, the Yale professor of engineering whose inquiries led to the machine's discovery, dated it at about 1818 or 1820 and wrote about it in magazines, and it was pictured in histories of machine tools as late as 1960, identified as Eli Whitney's 1820 milling machine, the oldest one still in existence. A replica of this machine was made for the Smithsonian; the original is on exhibit at the New Haven Colony Historical Society. An authoritative monograph on the history of milling machines by Robert S. Woodbury, published in 1960, said extremely complimentary things about Eli Whitney's "keen originality" and "breadth of technical vision in applying the principles of interchangeable parts and specialization of labor."[6]

The Demolition of the Myth

Robert Woodbury apparently had second thoughts about Whitney immediately afterward, for that same year he published an article debunking what he called "The Legend of Eli Whitney and Interchangeable Parts."[7] His evidence for disbelieving the legend was both documentary and material in nature. On documentary evidence he pointed out that Eli Whitney could not have been the first to have the idea of interchangeable parts for muskets, for Thomas Jefferson had already visited a musket-maker named Honoré Blanc in France in 1785 and written home that Blanc was making musket locks on that principle. On material evidence, Woodbury said the muskets made by Eli Whitney did not in fact have

interchangeable parts. That is, if you took several of them apart, mixed up the parts, and tried to put them back together, they would not fit. Third, Woodbury used documentary evidence, namely, the detailed inventory of Whitney's estate that was made when he died, to point out that there were no machines in that inventory that would qualify as advanced for their time, and that on the contrary, a great many hand files were listed as on the premises, which would not have been needed, he argued, in a machine-equipped factory. He also said that Joseph Wickham Roe's evidence for identifying the extant milling machine from the Whitney barn as the oldest one ever made was hardly adequate, resting as it did on hearsay, or local oral tradition of the old workers at the armory. Finally, Woodbury argued that once we realize how little is actually known about the machines and methods that Eli Whitney, Sr., in fact used, and once we realize that his predecessors—such as Blanc in France—and contemporaries—such as Simeon North in Middletown, Connecticut, and John Hall in Harper's Ferry, Virginia—were as close or closer than Whitney was to producing interchangeable parts, we should also recognize that his armory could not have been the single source of inspiration for the rapid development at other factories of the American system of manufactures in clocks, sewing machines, and other mechanisms.

Indeed, once the Whitney myth was shaken by Woodbury, research by other scholars has shown that interchangeability for muskets or rifles was not attained by other arms manufacturers of Whitney's day either, with the important exception of John Hall's patent breech-loading rifles, which were of nonstandard design. Not until well into the 1840s—more than fifteen years after Whitney's death—was interchangeability achieved for the U.S. Army standard issue muskets and rifles. [8]

The debunking of Eli Whitney's armory that Woodbury's article began in 1960 was completed in 1966 by the Smithsonian curator Edwin Battison in his detailed article entitled "Eli Whitney and the Milling Machine." [9] Battison relied very heavily on material evidence, that is, close inspection of tool marks on the lock parts of some of Eli Whitney's muskets from the contracts of 1798 and 1812. First, he noted that all the critical parts of a given lock were incised with the same small Roman numeral, I through X, which was a clue that the lock parts had been fitted together before hardening, then numbered with the same number, taken apart for hardening, and put back together afterward. If the parts had been interchangeable, he argued, this numbering would have been unnecessary; they would have fit at random. Battison's article also explains the difference between "hollow milling," which could be used to shape the shanks of pins and screws, and "true milling" of the sort that would be done by a milling machine. He shows that while the marks of hollow milling are found on Whitney's lock parts, there are no marks that would have been made by a true milling machine such as the one at the New Haven Colony Historical Society. This examination of material evidence changes the interpretation of the only reference by Eli Whitney himself to "milling" that has been found in the written record: in a letter to Secretary of War

John C. Calhoun on March 20, 1823, Whitney refers to milling the ends of the bow of a trigger guard. This type of milling, we now recognize, thanks to Battison, was a machine operation that could not have been done by the Whitneyville milling machine, but by a hollow milling cutter (see figure 3).

The revisionist articles by Woodbury and Battison in the 1960s effectively demolished the Whitney myth among historians of technology. For them, Eli Whitney, Sr., was demoted from heroic status as Father of the American System of Manufactures to just another arms contractor whose only distinction was his previous invention of the cotton gin and his persuasive sales pitch to the government about uniformity of parts—a pitch he was unable to deliver on. Curiously enough, some of these historians have gone further and called Eli Whitney a charlatan who was purposely deceiving the government about his achievements. In doing so, they seem to be rather naively mythologizing the person of Whitney in the opposite direction—into a villain.

Archaeological Investigations, 1974–75

In the early 1970s it was recognized that the newly emerging branch of archaeology known as industrial archaeology might be able to turn up new material evidence about Eli Whitney's undocumented machines and methods. Plans were laid for searching at the armory site itself for machines and machine parts and for discarded incomplete gun parts, and for studying the layout of the armory buildings, most of which were no longer standing. A team of historians, architects, and archaeologists was assembled under the auspices of the New Haven Colony Historical Society and the National Park Service. These researchers conducted an interdisciplinary study of the Whitney Armory site in the summer of 1974. In the summer of 1975 the archaeologists did more excavating at the site. The historians of the team resifted the relevant documents in 1974 at the Yale University Archives and at the New Haven Colony Historical Society library for information about the physical layout and changes at the site over its whole timespan since 1798. The architects measured and pictorially documented the standing structures that dated from the time of Eli Whitney, Sr. (see figure 4). In the two summers of excavations, which were aimed at identifying and exposing the foundations of structures dating from 1798 to 1825, the archaeologists uncovered over half of the early armory's forge shop and important parts of the early armory's waterpower system on both sides of the Mill River. Any underground remains of the original 1798 factory buildings, which had been obliterated by new construction in 1860, eluded identification by the archaeologists. They did find gun parts in and around the millraces and building foundations that they excavated, but none were from models dating to the time of Eli Whitney, Sr. And they found no machines or machine parts identifiable as such. The chief archaeologist, David Starbuck, concluded that this was because the building sites had been repeatedly demolished and rebuilt upon so far into the twentieth century that little re-

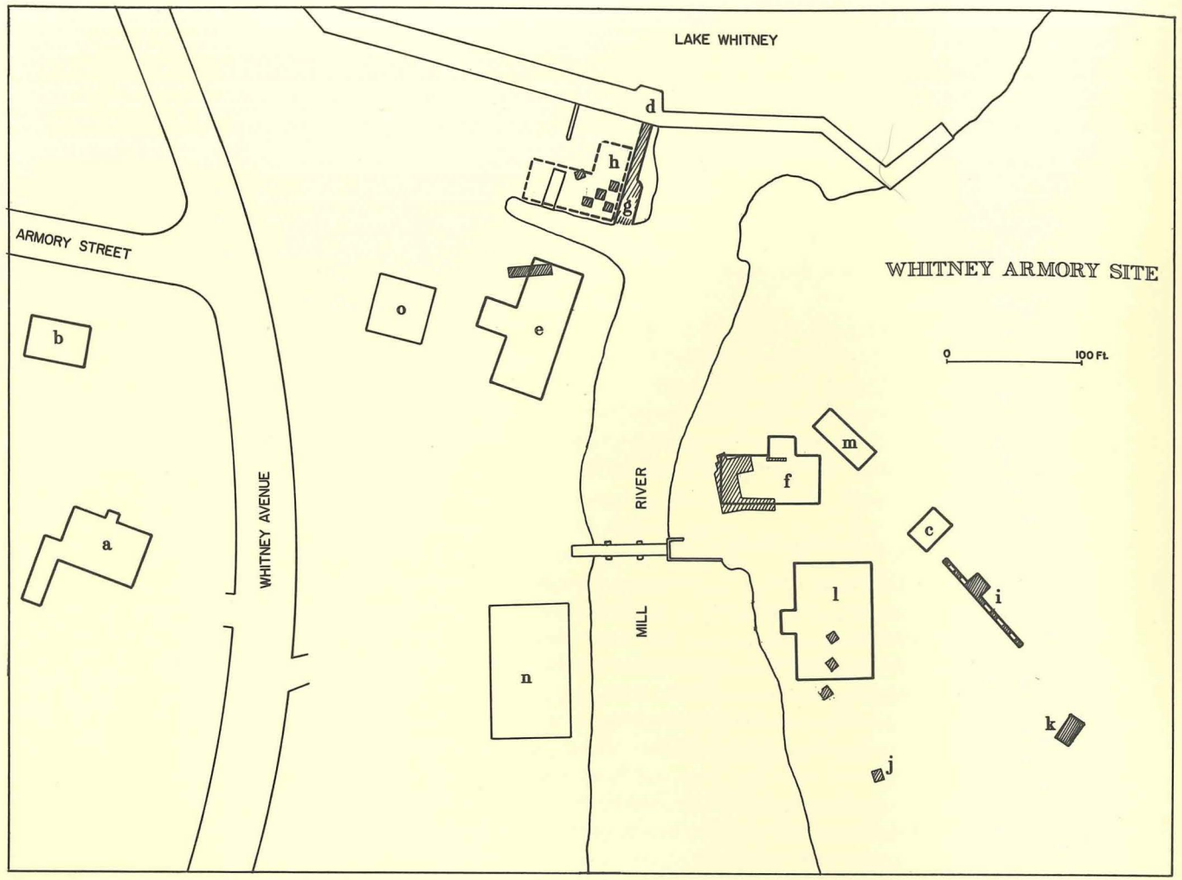


Figure 4. "A Whitney Armory Site Map"

Of the buildings now standing at the Whitney Armory site, three date from the time of Eli Whitney (1765–1825). They are "a," the 1816 barn, "b," the boardinghouse for unmarried workers, and "c," a stone shed originally used for charcoal storage. The latter was in a row of sheds, possibly including "i," that were probably built around 1804 at the same time as the forge shop "f," no longer standing. The forge shop straddled a millrace and was powered by an undershot waterwheel. Whitney first built his filing and machine shop "h," in 1798–99. (Its foundations have not been found, so its dotted outline is approximate.) It was powered by an undershot waterwheel in the adjacent millrace "g." Eli Whitney, Jr. (1820–1895) changed over to water turbines in the late 1840s, and raised the dam "d" to its present height of thirty-five feet in the 1860s to form Lake Whitney as a water reservoir for New Haven. He built a new main factory building "e" in 1860, approximately where his father's gunstocking shop had been, and also put new buildings up over the site of the old filing and machine shop. He probably built his foundry "l" in the 1840s. Foundry crucibles were discarded at "k." The building "m" housed annealing and case hardening processes in Whitney, Jr.'s, day. In 1885 he built an office at "o," later enlarged into the building standing there today. The largest building presently at the site, "n," probably dates from the first decade of the twentieth century. Most recently it housed Heany Industries. Crosshatchings at "e," "f," "g," "h," "i," "j," and "l" show archaeological test pits and excavations in 1974 and 1975; "k" is the crucible dump, partly excavated in 1979.

mained for excavators to find except for building rubble. To find old gun and machine parts, he recommended that future excavations at the armory be conducted on trash pits.[10]

Crucible Dump Study, 1979

The advantage of a trash pit would be that it would contain a relatively undisturbed concentration of discarded industrial artifacts. But unlike picturesque buildings, trash pits are understandably enough usually missing from the documentary record for a site and are therefore harder to locate. In 1979, however, a deposit of industrial waste was found by chance in East Rock Park just outside the present-day boundary of the museum grounds. It consisted of a great number of broken graphite foundry crucibles mixed with a small amount of dirt and domestic trash. This time the question for research was posed by the material evidence itself rather than by the historians. The crucibles asked for explanation: how old were they? who had used them, and for what? Preliminary inquiry about the history of graphite crucible manufacture in America and about the twentieth-century occupants of the armory site pointed toward a nineteenth-century date for the crucible dump, that is, during the era of arms manufacture at the site. So it seemed likely that the crucibles had been used in the no-longer-standing building that had been called a foundry, located some dozens of yards away through the woods from the crucible dump.

But this was puzzling, for the literature of the history of nineteenth-century small-arms manufacturing technology says nothing whatsoever about the use of crucibles or of foundries. That literature focuses on metal-cutting and metal-forging technology but not on metal-casting technology. Yet the large numbers of crucibles in the dump seemed to imply a large-scale casting activity at the armory. To find out more about this puzzle, the class in archaeological field methods at Yale University, taught by Professor Harry Merrick, conducted an excavation of the dump in the autumn of 1979. After laying out a grid of meter squares over the dump site the students removed ten-centimeter-deep levels of debris from the dump, and duly numbered and recorded each man-made artifact found. Nine hundred four crucible fragments were excavated; there were more of them than anything else. A few clay smoking pipe fragments were found in the dump, some sherds of ceramic tableware, some pieces of bottle and window glass and thin glass tubes, some scraps of leather, mostly from old shoes, and some bone fragments from pigs, sheep or goats, and fowl. In contrast to the excavations of 1974 and 1975, very little metal was found; it was mostly iron nails and screws. A little ammunition—two brass cartridge cases and one lead slug—was found but no gun parts. A few bits of this trash gave clues for the date of the dump: a decorated clay pipe bowl was of a style popular in the 1820s to 1840s; a champagne bottle base had been made in a way that tentatively dated it to the 1880s; and an ironstone plate fragment had a mark used by an English tableware

manufacturer between 1850 and 1882. Even more directly, we could read incised dates on the bottom of a few of the crucibles: 1849 and 1850. A few other crucible bottoms had the mark of "Joseph Dixon Jersey City," a crucible maker who moved from New England to Jersey City in 1847. So we have dated the crucible dump contents to the time of Eli Whitney, Jr., in the midnineteenth century, rather than to the time of his more famous father or his less famous successors at the site.

The next question concerning the crucible dump is its size, and how much metal casting it represented. Our 904 fragments are a small proportion of the total of crucible sherds remaining in the dump. Perhaps 4 percent of the total was uncovered before the semester's digging ended in December. Although none of the crucible fragments fit together into a whole crucible, the 248 fragments that included a rim edge were used to estimate the statistical distribution of rim diameters, and from that, of crucible sizes and capacities using a modern table of sizes. Ninety-six percent of the estimated rim diameters were eight or nine inches, indicating crucibles in the size range that would hold 74 to 134 pounds of brass each. Each crucible could be used for several times, or "heats," for melting before the high temperatures to which it was subjected would wear it out. With proper care a nineteenth-century graphite crucible would last for about twenty to forty heats of brass or four to six of steel, which melts at a higher temperature. Since excavation stopped at the crucible dump long before completion, we are not sure how many crucibles in all *were* dumped there; hence it remains uncertain how much metal in total was melted in them. But these considerations of crucible size and number of heats per crucible, together with the substantial number of fragments in the dump, certainly make it seem that more was involved than a small-scale casting of the gun fittings that we know were of brass on some of the models of Whitney long arms and also more than the brass we can calculate was needed for casting the frames of those models of Whitney pistols whose frames are brass. [11]

Crucible digging led us back to document digging to find out more about the foundry in which they were supposedly used. Unmentioned in Whitney, Sr.'s, papers, it was probably built early after Whitney, Jr., took over, for in letters dated 1842 and 1843 he mentioned using his own furnace to do brass casting, and was recruiting brass casters to work for him. [12] The foundry appears in pictures and maps of the armory site after 1860; it grows derelict, is used for storage, and disappears sometime around World War I. A map from 1886 identifies its tall chimney as a foundry cupola, or furnace for remelting iron, which remained standing alone, according to living memory, long after the foundry disappeared. The foundry was 100 ft. by 60 ft. and was described as one of the major structures at the site during the late nineteenth century. [13] Again, it seems to have been more important than one would need for brass casting alone. Now the puzzle had two aspects. Eli Whitney, Jr., seems to have had more than enough crucibles for casting brass and a larger-than-necessary foundry. Furthermore, the foundry had a cupola, which is used for melting iron rather than brass. Brass is melted in crucibles in

low, horizontal furnaces. The documents do not tell us why he needed these things.

Eli Whitney, Jr.'s, Use of Malleable Cast Iron

We believe we have found a missing clue to the puzzle in the material evidence from the site rather than in the written evidence. This clue was not visible to the naked eye but emerged from laboratory analysis. Metallography by Yale University Professor Robert B. Gordon of an unfinished iron pistol frame excavated elsewhere at the Whitney site closely resembled that of a finished frame from the same model Whitney pocket revolver, made in the late 1850s and early 1860s. They both turned out to be made of malleable cast iron, which was visible in the microstructure of a small sample cut from each frame. [14] Ordinary cast iron would be brittle and therefore totally unsuitable for gun frames, but iron of the correct composition would make castings that could be made malleable by heat-treating or annealing at precisely controlled temperatures for the right lengths of time. So the material evidence shows that Whitney, Jr., was using a casting technique instead of a forging technique for shaping iron pistol frames, even though forging is the only technique that has been described for this purpose in the history of nineteenth-century gun-making technology. [15]

According to the antique arms collectors' literature, Whitney, Jr., made 32,500 pocket revolvers of the type tested. That number would be well within the capacity indicated by the crucible dump. Since then we have tested the frames of three other models of Whitney-made revolvers and found them all to be of malleable cast iron. One of them was a finished Navy model Whitney revolver from the Eli Whitney Museum collection; 33,000 of this model revolver were made in the late 1850s and early 1860s. The other two are unfinished frames found at the armory site. One is for the so-called new model pocket revolver, which had a run of less than 2,000 in the years 1860–67. The other model is the rimfire breech-loading revolver, 30,000 of which were made between 1871 and 1879. This model is listed in our antique arms source book as having been made only in brass, so these iron frames for that model are completely unaccounted for in the written evidence. [16] But now the large size of the crucible dump begins to be less puzzling as we start to account for it with crucibles used for melting iron for malleable castings.

Whitney, Jr., certainly did not shift to casting techniques for all of his gun parts; he continued to use the forging capability at his forge shop. Metallography of a repeating rifle receiver excavated at the armory site, of a type made in the late 1870s and early 1880s, shows that it was forged, or wrought, iron rather than an iron casting. But for his pistol frames, Whitney apparently chose the alternative technique of malleable cast iron, which had been developed in New Jersey in the early 1830s and was just coming into the New Haven area in the 1850s for making carriage fittings for New Haven's thriving carriage industry. Malleable

cast iron made pistol frames at least as strong as those of forged wrought iron. He could use the same kind of graphite crucibles for this purpose as he used for casting brass frames, but it would wear the crucibles out faster—and therefore make a bigger crucible dump—since the melting temperature for cast iron is about 400° centigrade higher than for brass. He could also use the foundry cupola for this purpose instead of the crucibles, or in addition to them. The bowl of an iron casting ladle excavated at the site has a slaggy residue in it that has been analyzed by microprobe technique as being iron of the appropriate chemical composition for pouring malleable iron castings; such a ladle would be used with a cupola furnace instead of the air furnace needed with crucibles. It is possible that with his malleable iron casting facility Eli Whitney, Jr., also contracted on the side for making objects unrelated to arms production—for example, carriage fittings.

Although foundries these days specialize either in ferrous or nonferrous castings, it now seems clear from this material evidence that Whitney, Jr., used his foundry for both iron and brass. According to arms collectors' reference books, Whitney, Jr., stopped making handguns in 1879. He may have stopped using the foundry about then too, for the 1886 map labels it "old foundry now used for storage" and does not show a new one. Long arms production continued for some years—so did the forge shop—until the Whitney Arms Company was bought out in 1888 by the Winchester Repeating Arms Company.

For arms manufacture as well as many other purposes, both kinds of iron we have mentioned—wrought iron worked by forging and malleable cast iron from a foundry—were superseded in America by steel once the Bessemer process for making steel had been adopted and perfected so that it was available in sufficient quality and quantity to be economical. This occurred in the 1870s in general; we do not yet know whether Whitney, Jr., in particular shifted from wrought iron to steel for such parts as rifle receivers in the last few years before he retired from the business. But we are told by the written sources that he was one of the earliest, if not the first arms manufacturer in this country to adopt the use of steel instead of wrought iron for making gun barrels. He did so in the 1840s, when he was still a newcomer to the business. He imported the steel from England, for in those days, although many American iron masters were experimenting unsuccessfully with attempts to make steel, there was no American source of steel of high enough quality. (Oral tradition says Whitney, Jr., also attempted unsuccessfully to make steel himself.) The U.S. Armory at Springfield did not shift to steel barrels until after the Civil War. According to one of Eli Whitney, Jr.'s, cousins, William P. Blake, who wrote the centennial history of Hamden in 1886, Whitney, Jr.'s, steel barrels made his contract 1842 rifles so far superior to those supplied from Springfield and from other contractors that the U.S. Army riflemen sent to fight in the Mexican–American War complained if they were not issued Whitney-made rifles, and the then Secretary of War Jefferson Davis wrote a glowing testimonial to their superiority. Metallographic comparison of the barrel of

the Whitney pocket pistol with the barrel of a rifle made at the Springfield Armory just before the Civil War confirms that Whitney, Jr., was using steel while Springfield was still using wrought iron for its gun barrels. [17]

So, although Eli Whitney, Jr., is not the legendary figure that his father was, the archaeological evidence indicates that he was alert to the potential of new techniques for his factory, like the malleable iron casting for pistol frames and the use of steel for gun barrels. Thanks to his adaptability, the Whitney Armory was rare among the earliest gun manufactories in that it lasted beyond the life of its illustrious founder.

As historians outgrow and reject the "great man" theory of history (and also the great villain theory) and pay more attention to the complex interactions of ordinary people in the past, they should increasingly pay attention to the evidence that archaeologists are turning up about the material culture of those ordinary people. As archaeologists know, one can learn to "read" a material artifact in its context as well as one can learn to read an historical document in *its* context. By "reading" material culture in an industrial context at places like the Whitney Armory site, we can find evidence not only about the small arms that ordinary people took with them on their westward trek across the American continent, but also about what the mechanics were doing inside factories that were producing those arms.

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NOTES

1. Letter from Eli Whitney to Oliver Wolcott, May 1, 1798; Eli Whitney Collection, Historical Manuscripts Division, Yale University Library (hereinafter, "Whitney Papers").
2. Letter from Whitney to Wolcott, July 30, 1799; Whitney Papers.
3. Letter from Philos Blake to Elizabeth Blake, September 7, 1801; Box 13, Blake Family Collection, Historical Manuscripts Division, Yale University Library.
4. William H. Avis, "The World's Great Debt to Genius," *Connecticut Magazine* 9 (1905): 733–44.
5. Jeannette Mirsky and Allan Nevins, *The World of Eli Whitney* (New York: Macmillan, 1952); Constance McLaughlin Green, *Eli Whitney and the Birth of American Technology* (Boston: Little, Brown, 1956).
6. Robert S. Woodbury, *History of the Milling Machine* (Cambridge: MIT Press, 1960), p. 22.
7. Robert S. Woodbury, "The Legend of Eli Whitney and Interchangeable Parts," *Technology and Culture* 1, no. 3 (Summer 1960): 235–53.
8. Charles H. Fitch, "Report on the Manufactures of Interchangeable Mechanism," *Report on the Manufactures of the United States at the Tenth Census*, U.S. Census Office, Washington D.C. 1883, pp. 618–19.
9. Edwin A. Battison, "Eli Whitney and the Milling Machine," *Smithsonian Journal of History* 1, no. 2 (Summer 1966): 9–34.
10. David R. Starbuck, "Archeological Research at the Eli Whitney Factory Site," *Journal of the New Haven Colony Historical Society* 25, no. 1 (1977): 27.

11. Norman Flayderman, *Flayderman's Guide to Antique American Firearms* (Northfield, Ill.: D.B.I. Books, 1977), pp. 236–51.
12. Eli Whitney, Jr., letters to: Robert Johnson, Jr., Dec. 20, 1842, Thomas Warner, Nov. 22, 1842, Dec. 29, 1842; Thomas Blanchard, July 7, 1843, Oct. 12, 1843; James P. Ingols, Sept. 30, 1843, Oct. 25, 1843; Blunt & Lynes, Dec. 27, 1843; Box 11, Folder 172, Whitney Papers.
13. William P. Blake, *History of the Town of Hamden* (New Haven, 1888), p. 143.
14. C.C. Cooper, R.B. Gordon, and H.V. Merrick, "Archeological Evidence of Metallurgical Innovation at the Eli Whitney Armory," *IA*, the Journal of the Society for Industrial Archeology 8, no. 1 (1982): 1-12.
15. Fitch, "Report on the Manufactures," pp. 635–37.
16. Flayderman, *Guide to American Firearms*, pp. 250–51.
17. Robert B. Gordon, "Materials for Manufacturing: The Response of the Connecticut Iron Industry to Technological Change and Limited Resources," *Technology and Culture* 24, no. 4 (1983): 602–34.

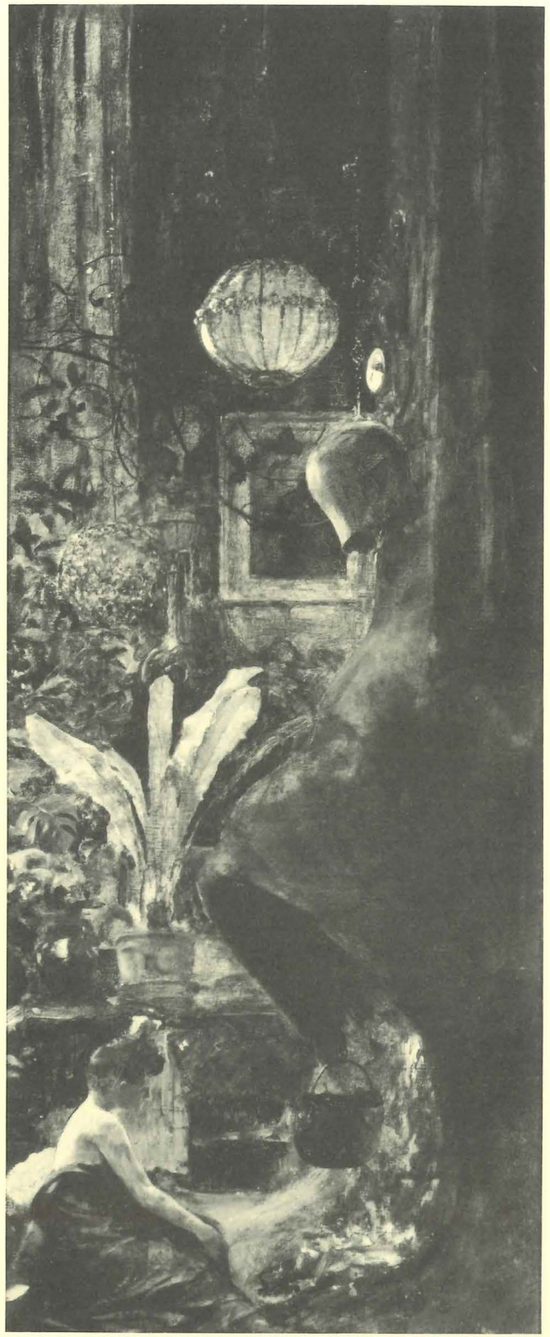
Touches of Tiffany: Louis Comfort Tiffany in New Haven

by William A. Wiedersheim

Between the second and sixth decades of our century, the enormous artistic output of Louis Comfort Tiffany, who was born in 1848 and died in 1933, lost most of the popularity it had enjoyed between 1870 and 1915, and Tiffany's fame as artist and craftsman fell victim to new styles and new trends in painting, decoration, and design. After World War I, Tiffany glass became *passé.* But during the past twenty years there has been a great resurgence of interest in Tiffany as a person and renewed appreciation of the tremendous scope of his varied artistic talents. As a painter, artisan in colored glass, and decorator, he was, and is once again, recognized as one of the most creative American artists of his time. His designs in colored art glass, and those of the designers he employed, are acknowledged to be the best American representations of Art Nouveau. And Tiffany was an astute businessman as well as a consummate artist, able to successfully build up and manage a productive organization of more than two hundred designers and craftsmen. He was a self-taught interior designer and a self-taught industrial engineer. He made one fortune, inherited another, loved life, and loved to live superbly well.

While still a youth, Tiffany elected to make his own way as an artist rather than attend college and then join the jewelry firm which his father, Charles Lewis Tiffany, had cofounded in 1837. He studied painting in New York under George Inness, the only student Inness ever accepted, and Samuel Colman, and then in Paris under Leon Bailly. While in Europe, he traveled extensively and was spellbound by the early Christian mosaics in Ravenna and by the blues and ruby reds of the cathedral windows in Chartres.

Tiffany achieved almost instant popularity as a painter, and in the 1870s his paintings brought from $500 to $1500 each, while at the same time, Winslow



"A Corner of the 72nd Street Studio." Louis Comfort Tiffany painted his second wife, Louise Wakeman Knox, in the top-floor studio of their Manhattan home ca. 1896. (Photo: Courtesy Yale University Art Gallery, Gift of Louis Tiffany Lusk.)

Homer considered himself fortunate to sell a painting for $150. Reviews of showings of his oils and watercolors were invariably favorable. He exhibited seven paintings in the Decorative Arts Section of the Centennial in Philadelphia in 1876. Although he continued painting until his death, Tiffany felt personal limitations in this medium, and after 1878 his interests turned toward the decorative arts and to colored glass in particular.

When asked in an interview why he was attracted to glass as a medium, Tiffany replied, "The most beautiful thing in the universe is—glass." He believed that well-handled colored glass was more beautiful than fine gems or precious metals. In 1875, at the age of 27, Tiffany began experimenting with stained glass. Together with John LaFarge, who had always been his friendly competitor, he studied chemistry and worked in the Heidt glass-house in Brooklyn. Both of them made their first ornamental windows of opalescent glass in 1876, both installed their first figure windows in 1878, and both worked for the same architect on the same job in 1881, always in a spirit of competition. In 1878 Tiffany established his own small glass manufacturing plant. In 1879, with several associates, he formed Louis C. Tiffany & Company, Associated Artists, offering a complete decorating service. The group quickly gained a fine reputation for its interior design capabilities and was soon, along with the Herter brothers, the most sought-after decorating firm in New York City. The association disbanded in 1884, and in 1885 the Tiffany Glass Company was incorporated; it was reincorporated in 1892 as the Tiffany Glass and Decorating Company, and again in 1900 as Tiffany Studios. By the end of 1893, the Tiffany Furnaces were in operation in Corona, Long Island, with a glass-blowing division under the direction of the talented British-trained artist Arthur J. Nash, who was described as "a wizard with a blowpipe."

Tiffany developed an opalescent colored glass with a pleasing—even vibrant—metallic luster and was able to obtain a patent on the process in 1881. He named the glass Favrile, a derivation from an Old English word, *fabrile*, meaning "belonging to a craftsman or his craft." He waited several years until he felt the production process was perfected before introducing the new glass into his glassware and windows. The luster of Favrile glass set Tiffany apart from his competitors.

Several of Tiffany's Favrile glass mosaics were monumental works of art. The marvelous stage curtain of the Municipal Theatre in Mexico City, completed in 1911, is still a tourist attraction. The "Dream Garden" mosaic picture in the lobby of the Curtis Publishing Company building in Philadelphia, based on preliminary drawings by Maxfield Parish, was 15 feet high and 49 feet long. The skilled labor of thirty artisans was required to install the million plus pieces of glass required to complete the project. The Tiffany dome five stories above the ground floor of the Marshall Field store in Chicago required over a million and a half perfectly cut pieces of Favrile glass. In 1882, President Arthur commissioned Louis C. Tiffany and Company, Associated Artists, to redecorate portions of the White House. Tiffany replaced the ground glass which had separated the first-

floor corridor from the entrance vestibule with a screen of opalescent glass, its many-hued panels featuring national emblems. President Theodore Roosevelt took an instant dislike to the panels and ordered them destroyed.

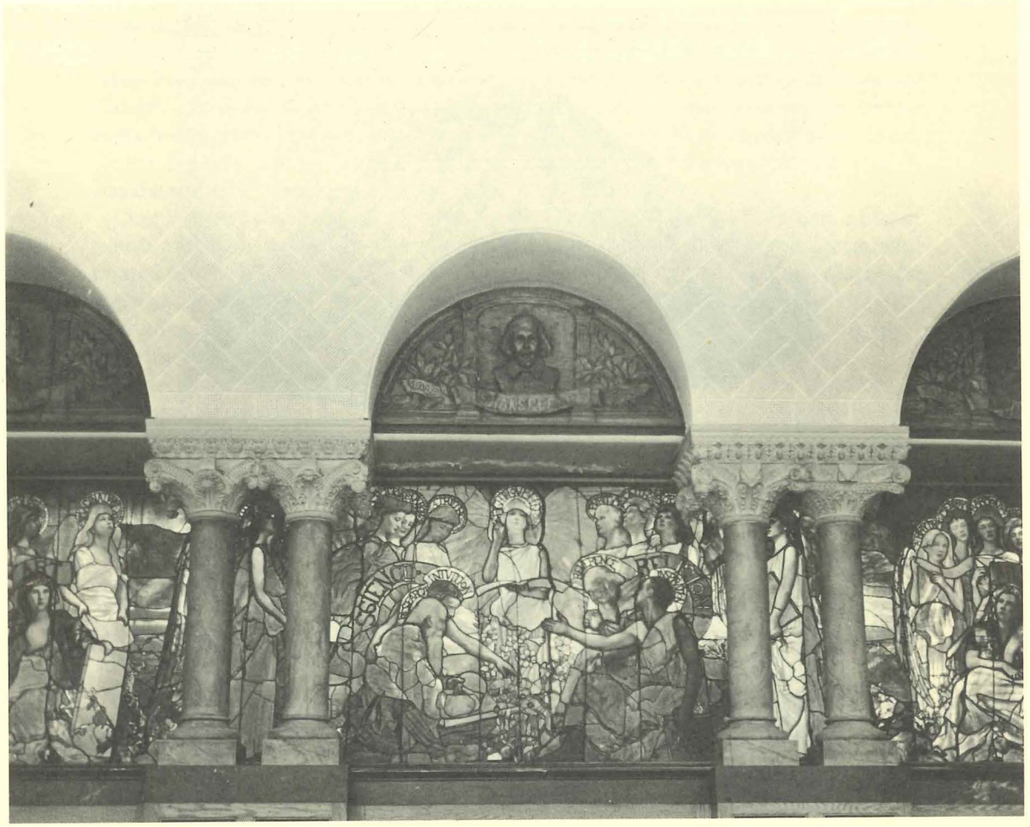
Notable Tiffany commissions in Connecticut, but outside New Haven, include the redecoration in 1881 of Samuel L. Clemens's home in Hartford, one of his first interior designs, and carried out with Candace Wheeler and other associates of his firm. Mark Twain was delighted with the results, but after his death the interior suffered under a series of indifferent owners. Now the home is a museum, and the Tiffany decorations of nearly a century ago have been conscientiously restored. Original hand-painted wallpapers were found in some rooms under several layers of modern printed wallpaper. The eighteen matched Favrile glass windows designed and manufactured for the Fairfield Congregational Church are stunning and have received wide acclaim.

Tiffany's ties to New Haven began in 1871, when he came to the city with his sister Annie to meet her fiance, Alfred Mitchell, member of a prominent Westville family. In the Mitchell home he met his future bride, Mary Woodbridge Goddard. During their courtship, Tiffany made frequent visits to New Haven, and they were married on May 15, 1872. These special ties of family and friendships may account for the numerous Tiffany creations in New Haven.

Mary Goddard Tiffany was lovely, charming, and energetic, but frail. She contracted tuberculosis and died on January 22, 1884, leaving her husband with three young children.

The time was right in New Haven for the acquisition of costly Tiffany creations by its wealthier citizens, for during the last quarter of the nineteenth century—and coinciding with the period of Tiffany's greatest popularity—New Haven was an important industrial city. It could boast of the presence of the largest rubber boot and shoe manufacturing concern and the largest mass-producer of clocks in the world. As it had been since the days of Eli Whitney, it was important in the manufacture of guns. Its oyster industry flourished. It was the home of the key New England railroad and a center for the manufacture of carriages and architectural hardware. Yale had outgrown its days as a college and was flexing its muscles as a great, rich university. New Haven was prosperous; an aura of wealth was in the air. Its leading citizens could well afford to give their churches Tiffany memorial windows, acquire the delicate products of Tiffany Furnaces for their homes, and adorn their wives with costly art glass jewels.

New Haven was a beautiful city then. Magnificent elms shaded its streets. It was a cohesive community; today's suburbs were towns apart and there was virtually no commuter living. Leading citizens lived close to the heart of the city, the New Haven Green, and many of them could walk to work. Promising young men joined the city's aristocratic military company, the New Haven Grays, by invitation. The three historic churches on the Green played an important social role and were crowded on Sundays. The vibrant life of the city was reflected in the pride and élan of its people. Today most of the industry is gone, as are the



Since its installation in 1890 in the Chittenden reading room of the old Yale library, tens of thousands of students have studied, been lectured to and examined under the magnificent Mary Hartwell Lusk memorial window. (Photo: Ottilia Koel)

The Tiffany ''Bronze Lamp with Dragonfly Shade'' is a prized addition to the famous collection of American furniture and decorative arts exhibited at the Yale University Art Gallery. (Photo: Courtesy Yale University Art Gallery, bequest of Evelyn A. Cummins.)

oysters. Disease has destroyed the elms and the railroad is kaput. While Yale is, of course, a great world university, it pleads poverty. The New Haven Grays have been succeeded by an egalitarian company of the Connecticut National Guard. On Sunday one can find an empty pew in the churches on the Green with the greatest of ease. But much of the heritage of New Haven's late nineteenth century golden, Tiffany-era days remains in its churches and many of its handsome city homes.

One indirect touch of Tiffany's creativity in the New Haven area had a rather weird and unhappy ending. In 1893 Tiffany designed and executed a beautiful chapel for the Columbian Exposition in Chicago. One of the few non-Neoclassic sights at the fair, its features were reminiscent of Ravenna. It was most effective and popular, attracting more than a million and a half visitors and receiving fifty-four medals and awards.

A wealthy Chicago widow, Celia Whipple Wallace, who was known as Chicago's Diamond Queen, was particularly enchanted by the chapel's beauty and the glow of its Favrile glass, and she arranged for it to be donated at the conclusion of the exposition to the Cathedral of St. John the Divine in New York City, then in an early stage of construction. The chapel was eventually moved there at her expense. A few years later she dropped completely out of sight and was tracked down in 1916 by a newspaper reporter who found her living in penury, her fortune exhausted by charities, in a tiny cottage in Savin Rock, a New Haven blue-collar suburb best known then for its amusement park with roller coaster and its family style seafood restaurants and vaudeville. She died there in poverty.

The beautiful chapel has had a peripatetic history, portions of it having found a home in New Haven for fifteen years between 1955 and 1970. Between 1894 and 1897 it remained in Tiffany's Fourth Avenue studios in New York City, when Mrs. Whipple's largesse permitted its installation in the crypt of the cathedral, which at the time was being designed along modified Romanesque lines. Only the crypt and the apse were completed in Romanesque form. The Tiffany chapel was exactly right for the cathedral at the time and was used for all services held there from January 1898 until 1911, when the main nave and choir were opened. By then the architectural firm of Cram, Goodhue and Ferguson had been engaged to further the cathedral's design, and the new architects converted its design from Romanesque to Gothic. Ralph Adams Cram's unspoken antipathy for Louis Comfort Tiffany's ebullient personality, the result of an unfortunate personal encounter some years earlier, caused Cram to direct that the Tiffany chapel be sealed off in the crypt, and in 1916 Tiffany repossessed it. He installed it in a small structure near his magnificent home, Laurlton Hall, on his sixty-acre Long Island estate, where it was consecrated as a ''Temple of Art, not a Place of Worship.'' A few of the windows of Laurlton Hall are now in the new forecourt of the American wing of the Metropolitan Museum of Art.

In 1957, nearly ten years after Tiffany's executors had sold it for a pittance,

Laurlton Hall was tragically razed by fire. About that time Albertus Magnus College in New Haven made plans to build a chapel on its campus, and in 1955 received as a gift from Frances deForest Stewart, a trustee of the Louis Comfort Tiffany Foundation, the altar, lectern, baptismal font with leaded glass mosaic dome, four graceful Favrile glass candleholders, the exquisite altar cross of metal with inserts of art glass and semiprecious stones, and four pews, all from the original 1893 Tiffany chapel. These magnificent artifacts were to be the nucleus around which the new Albertus Magnus chapel would be designed. Pending its design and construction, they were installed temporarily in a prayer room in Albertus Magnus's Siena Hall, originally—by sheer and magnificent coincidence—built in 1913 by Tiffany's sister Annie as her home after the death of her husband, Alfred Mitchell. Her brother Louis made a number of contributions to the interior design of the house. The lighting fixtures are of his design, as was the front door of clear, patterned glass protected on the exterior by a graceful iron grille. A signed Tiffany window of pre-Favrile opalescent rose and white glass in a checkerboard pattern is adjacent to the front door, and a handsome Tiffany lamp stands on a small table near it. The window probably predates the house; possibly it came from Annie and Alfred Mitchell's earlier home.

Unfortunately, Albertus Magnus College's plans for the building of a chapel did not materialize; funds were lacking. In 1970 the college sold its elements of the Tiffany chapel to Mr. and Mrs. Hugh F. McKean of Winter Park, Florida, for installation in the Morse Gallery of Art there.

Elements of the Tiffany chapel have traveled widely, indeed—from Chicago in 1893 to Winter Park in 1970, with stops along the way, including one of fifteen years at a Tiffany related home in New Haven.

Yale has its touches of Tiffany, too. One sometimes hears of the ''compounds'' wealthy families build at summer resorts, but in 1885 Charles Lewis Tiffany built one for his entire family in the heart of Manhattan, at 72nd Street and Madison Avenue. His father naturally placed Louis Comfort in charge of its interior design and engaged Stanford White to work with him on the architectural plans. The top floor of the massive, Romanesque-style apartment house–mansion was a lofty studio with a four-sided fireplace, having a bolelike hood. Exotic plants gave the studio an Arabian Nights atmosphere, and there in 1896 Louis Comfort painted his second wife, Louise Wakeman Knox. Deep greens and reds dominate the painting, which is 12 1/8″ wide and 30 1/4″ high, its dimensions expressing the loftiness of the studio. In 1955 Tiffany's grandson presented the painting to the Yale Art Gallery, where it is exhibited with pride.

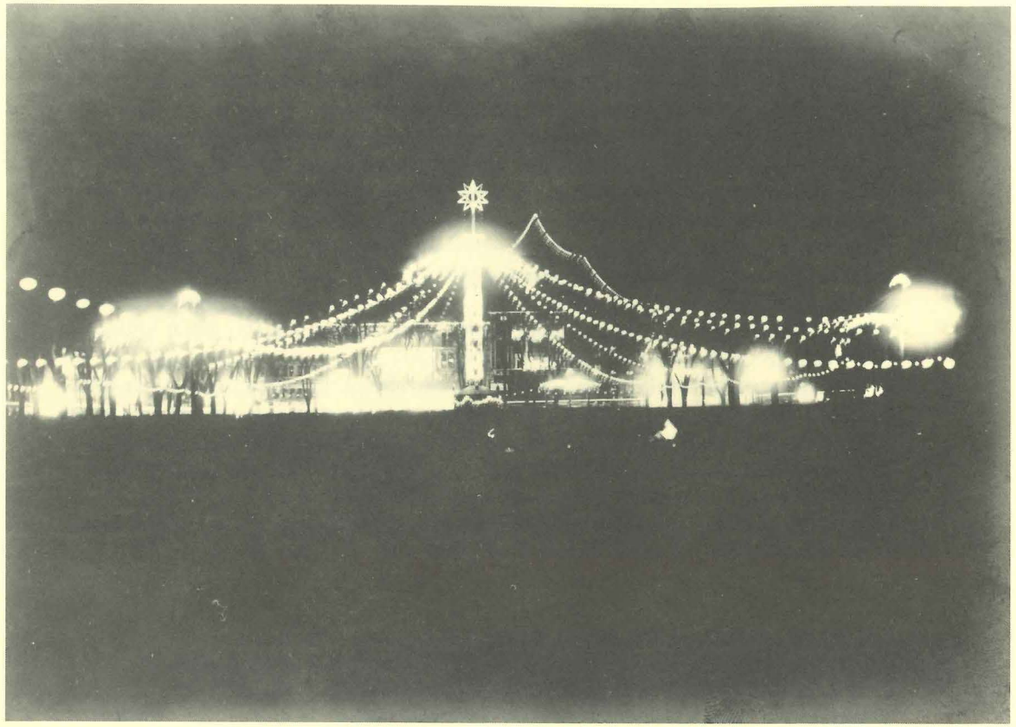
A handsome, dark Tiffany lamp and shade known as the Bronze Lamp with Dragonfly Shade are exhibited as a prized part of the Yale Art Gallery's American furniture collection. The gallery exhibits three graceful Tiffany vases of Favrile glass manufactured at the Corona furnaces between 1900 and 1910. It is hard to believe that such delicate objects could be virtually mass-produced, as they were by the Tiffany Furnaces.

In 1885 Samuel B. Chittenden offered Yale a new library wing in memory of his daughter and commissioned Tiffany to design a large 30′ long by 5′ high art glass window for its reading room. Tiffany made two abortive design starts. He tried to build a theme around St. Cecilia but did not feel that this was right for a reading room; he then attempted to develop a theme around an Angel of Light with the Book of Life in her hands, but found that inappropriate also. Tiffany worked closely with the donor on the design and wrote to him, ''But now I have arranged it by placing in the center an angel representing Light, Life and Love. On one side of her, Religion is represented by Reverence and Inspiration, while on the other side Science is represented by Research and Investigation. This will occupy the center, while Music and Art will occupy the right and left of the window. I think you will like it, and that the idea is best for the place and as a memorial.''

Tiffany prepared a full-size oil-on-canvas cartoon of this third concept for Chittenden's approval, which unfortunately has been lost, and worked from it in planning the panels of the window. The window, which was installed in 1890 in time for graduation, is visually divided into three parts by free-standing columns, and the completed whole is an allegory to education. More than twenty figures are portrayed, blending into one another with grace and ease. At the special request of the donor the reading room was opened to ladies, a great step ahead for Yale at the time. During the disgraceful town–gown riot of 1919 the glass in several frames of the window was broken by thrown rocks. The glass was replaced, and protective steel mesh was installed on its exterior. When Yale's Sterling Library was completed in 1930, the Chittenden reading room was remodeled into a lecture hall by architect Douglas Orr, who wisely did not disturb the memorial window.

There is a window usually ascribed to Tiffany on the north side of the balcony in Yale's Battell Chapel, given in memory of Samuel Wells Williams, LL.D., a professor of Chinese in Yale College. In the design are two columns of Chinese characters which may be translated as ''Success through Diligence.'' The window, which was installed in 1888, is darker than most Tiffany windows of the period. It is unfortunate that its location is not more prominent, for it is the handsomest window in the High Victorian Gothic chapel.

The interior of the only building at Yale designed by McKim, Mead and White, now a classroom building but originally the tomb of a wealthy Yale secret society, is another touch of Tiffany at Yale. When their tomb at the corner of Trumbull and Prospect streets was built in 1885, the members of the Wolf's Head Society commissioned the Tiffany Glass Company to decorate the interiors. Its rooms have finely detailed fireplaces and paneled walls, the stairs a delicate period-piece balustrade. Today it seems astonishing that a group of fifteen undergraduates could engage McKim, Mead and White to design and Louis Comfort Tiffany to decorate an impressive building used only one night a week for a secluded stag dinner. But that was the way Yale was in the 1880s.



As an important part of his Yale bicentennial decorations, Tiffany planned the nighttime illumination with great care. The dramatic results were—for 1901—a daring and imaginative outdoor use of electric lights. (Photo: Courtesy Manuscripts and Archives, Yale University Library.)

Louis Comfort Tiffany's final personal artistic contribution to Yale was the design and execution of the decorations for Yale's bicentennial festivities in the fall of 1901. Yale's contract was with Tiffany & Company, the jewelry firm founded by Louis Comfort's father, but in his titular capacity as the firm's vice-president and art director, Louis Comfort took the planning, design, and installation of the decorations under his personal wing. Garlands of greens and Japanese lanterns were hung on the halls of the Old Campus, and lanterns were hung in the trees. Most of the lanterns were orange, a Princeton color, but nobody seemed to mind. Tiffany designed a sculptural bicentennial pole for the New Haven Green that would hold its own as contemporary sculpture today. He paid particular attention to the planning of the illumination of the campus at night, and the special night-lighting during the festivities was spectacular. This preceded by two years the landmark illumination of the St. Louis World's Fair and at the time was a daring and imaginative use of electric lights out-of-doors. This was another touch of Tiffany's genius; he was always in the forefront of his time.

The bicentennial decorations were a great artistic success, and Yale expressed its appreciation by bestowing an honorary Master of Arts degree on Louis Comfort Tiffany in 1903. This gave him a special thrill for he had always been a little self-conscious about his lack of a university degree, despite the scores of art awards he had received. His honorary degree created for Tiffany and his descendants a heritage of four generations of contact with New Haven through Yale. His son, Charles Lewis Tiffany II, had graduated from Yale in 1900; two grandsons were Yale alumni, one graduating in 1924 and one in 1929. The latter, Louis Tiffany Lusk, spent his entire business career with Tiffany & Company, jewelers, founded by his great-grandfather, and one of his sons only recently retired as vice-president of the firm. A clutch of Louis Comfort Tiffany's great-grandsons entered Yale in the 1950s and 1960s.

But there are more touches of Tiffany in New Haven away from the Yale campus than on it. Until 1960 ten handsome memorial Tiffany windows, installed between 1894 and 1904, graced Center Church on New Haven's Green. (One of them is thought by some to have been designed by John LaFarge. The church's own records are not clear.) Now there is only one. In 1960 the edifice underwent major renovation, and the congregation and its architect felt, quite correctly, I think, that such an array of turn-of-the-century art glass windows was not in harmony with the simplicity of a Puritan meetinghouse. Nine of them were removed and replaced with new window sash and clear, small windowpanes. The displaced colored glass windows found welcoming homes, most of them nearby.

The one remaining Tiffany window, created by Joseph Lauber, one of the best artisans on Tiffany's staff, is located above the church pulpit. Its theme is derived from a painting by Thomas Pritchard Rossiter and depicts John Davenport, a founder of the New Haven Colony, preaching under an oak tree on the colonist's first Sunday in New Haven in April 1638 from the text in the 4th chapter of Matthew, ''The temptation in the wilderness.'' In the background small ships

ride at anchor in the harbor. It is a colorful, handsome window, certainly Louis C. Tiffany & Company, Associated Artists, at its best.

Three of the Center Church windows are now in the Buley Library at Southern Connecticut State University in New Haven. One is the so-called Ship Window, which depicts the ship *Hector* bringing the first colonists to New Haven in 1638. Small inserts in the four corners of the window show the four churches in which the First Church of Christ in New Haven has worshipped since its founding in 1640.

The second of these is known as the Water Brooks Window. It depicts a flowing brook and a deer in a sylvan setting and bears the inscription, ''As the hart panteth after the water brooks, so panteth my soul after thee, O God'' (from the 42nd psalm). It is known to have been designed by Tiffany himself.

The third of the Tiffany windows now in the Buley Library depicts an angel floating in the skies. These three windows are impressively installed as wall decorations rather than as windows and are back-lighted and handsomely framed.

Three of the Center Church Tiffany windows were donated to the then new house of worship of the Pitts Chapel of the Unified Free Will Baptist Church in New Haven, where they have been installed at the end of the church nave. One depicts a seated angel in a purple robe, with the book of Life in her hands. The second probably depicts the ascension of Mary into heaven and is believed to have been designed by Frederick Wilson, another of the talented designers in Tiffany's stable. In the third the colored panels of Favrile glass form a picture of Christ.

Two of the Tiffany windows from Center Church were passed on to a descendant of the original donors for installation in his home on Martha's Vineyard Island. One of these is thought by some to have been designed and executed by John LaFarge, Tiffany's friendly competitor. It is a colorful representation of Christ with outstretched hands. The second is a lustrous blue in tone and depicts angels looking down at an open book of scriptures which rests on an altar. Finally, the Center Church congregation passed one of its Tiffany windows on to Foxon Congregational Church in nearby East Haven. This lovely window depicts the woman at the well in Samaria.

Center Church's more formal neighbor on the New Haven Green, Trinity Episcopal Church, one of the first Gothic Revival churches in the United States and designed by Ithiel Town, boasts of three Tiffany windows. These are unusual and a bit deceiving, for on the exterior they are continuous, narrow, and soaring, but on the interior the center portion of each becomes a spandrel behind the church balconies.

The Harwood memorial window of opalescent Favrile glass, designed by Frederick Wilson, is located at the east end of Trinity and depicts an almost ethereal figure of Christ meeting the disciples on the road to Emmaus. The Boardman memorial window is next to it and depicts St. Paul preaching on the hill of Mars during his travels in Greece. On the north side of Trinity is a third Tiffany window of Favrile glass, also designed by Frederick Wilson, which depicts the adoration of the Magi.

The three Tiffany windows in Trinity Church represent design and manufacture of a decade later than most of those installed in Center Church. They are of a somewhat darker hue that is enhanced by the Gothic character of Trinity's soaring nave.

Louis Comfort Tiffany's close New Haven friends, the members of the Mitchell family, presented a Tiffany art glass window to their parish church, St. James Episcopal, in 1885. Because of his close friendship with the donors, Tiffany designed the window himself and supervised its installation personally. Its pre-Favrile geometric design is colorful, but the window does not have the quality, richness, or interest of Tiffany's and his staff's later windows of Favrile glass. In 1923 it was moved to a position over the altar of a new St. James.

There is a graceful window in Trinity Lutheran Church in downtown New Haven designed and installed by Tiffany Studios in 1916, and it is by far the most beautiful of all the windows in the fortresslike neo-Gothic edifice. There are Tiffany windows in the little-used chapel of the Fair Haven cemetery. The three particularly beautiful narrow, elongated Favrile windows in Trinity Episcopal Church in nearby Branford are of special interest. One was installed at the turn of the century and is typical of the Tiffany Studios designs of the period. The other two were installed in 1915 and might be said to be the ultimate in Favrile church windows, far more intricate, intense, and sophisticated than Tiffany's church window designs of thirty years earlier. These two matched windows center on three vertical medallions, each representing a religious concept, those in one of the windows incidents in the life of St. Luke. When they were installed, Louis Comfort considered them the handsomest to leave his studio in a decade. In spirit and execution they are quite different from the Tiffany Studios window in Trinity Lutheran, and they were obviously designed by different artists on Tiffany's staff.

Tiffany's opalescent Favrile glass windows were not limited to churches by any means, but were also commissioned for the mansions of affluent turn-of-the-century families. Generally, but not always, the secular windows were colorful, lively geometric patterns, and their opalescence provided privacy from the prying eyes of close neighbors, while at the same time admitting plenty of light. They were installed in countless fine homes throughout the country, including the famous Gamble house in Pasadena designed by the Greene brothers. There are a number of Tiffany windows in the crazy-quilt Winchester home in San Jose, built by the eccentric widow of the New Haven gun manufacturer, and there are more in storage there that were intended for installation in the storybook home that was never completed.

Tiffany Studios had a number of able competitors, some of whom were Tiffany-trained. But Tiffany never begrudged a man for leaving his organization to strike out on his own; rather he looked on him as somewhat of a protégé, for Tiffany knew that his organization set the standards for the trade and made the competi-

tion, even for John LaFarge.

There are fine examples of secular Tiffany glass windows in the historic Greek Revival Skinner–Trowbridge home, which was designed by Ithiel Town and enlarged by Henry Austin, on elegant Hillhouse Avenue. The home was purchased by Rutherford Trowbridge, heir to a West Indies shipping fortune, in 1908. About 1900 three matched windows of Favrile glass were installed in his earlier home in downtown New Haven. He valued them and took them along to his family's new home, adding a new bay to its billiard room to accommodate them. The patterns of the windows are a swirling, lyrical *Art Nouveau* and have an iridescent golden tone. Their theme is musical, one having crossed trumpets superimposed on a lyre, another allegorical griffins on either side of a lyre. Tiffany glass was the height of fashion when the family moved, and light sconces from Tiffany Studios were installed in the redecorated home. While the Trowbridge family lived there, the Skinner-Trowbridge mansion was also graced by a delicate Tiffany lamp and shade and two handsome lampshades designed by Hendal, a contemporary of Louis Comfort's and another but less talented designer in art glass from nearby Meriden. The historic home has been bequeathed to Yale.

Tiffany Studios produced a wide range of artifacts and handsome jewelry, and there are a number of examples in New Haven area homes, products of the enormous output of the Tiffany design organization and the Tiffany Furnaces. A member of the Yale Medical School faculty owns a graceful adjustable desk lamp of unique design. A North Haven family treasures a small, rare autographed Tiffany desk clock of elaborate design. Undoubtedly there are many other undiscovered treasures in other New Haven area homes.

Today the name Tiffany Glass has become generic. A local discount lighting fixture store in Derby advertises "Tiffany" lamps and lampshades at cut-rate prices. Few of its customers know of the creative genius from which the colorful fixtures stem, but the real Louis Comfort Tiffany left an indelible artistic imprint on our country, and there are very special Touches of Tiffany in New Haven.

WILLIAM A. WIEDERSHEIM, formerly Senior Research Associate at the New Haven Colony Historical Society and presently a Director, has written extensively on the history and art history of New Haven.

BIBLIOGRAPHY

Atwater, Edward E. *History of the City of New Haven.* New York, 1887.
Brown, Elizabeth Mills. *New Haven, A Guide to Architecture and Urban Design.* New Haven, 1976.
Church Restoration Committee, Center Church, New Haven. *A Record of Memorials and Gifts, The First Church of Christ in New Haven, 1960.* New Haven, 1960.
Dana, Arnold Guyot. "New Haven Old and New," (volume 42) NHCHS.
Getlein, Edward J. *Here Will I Dwell, a history of Trinity Church-on-the-Green.* New Haven, 1976.
Hendrickson, Robert. *The Grand Emporiums.* New York, 1979.
Holden, Reuben A. *Yale Memorials.* Office of the Secretary, Yale University, 1960.
Koch, Robert. *Louis Comfort Tiffany,* text and chronology, catalog of the exhibition "Louis Comfort Tiffany," by the Museum of Contemporary Crafts. New York, 1958.
_____. *Louis C. Tiffany, Rebel in Glass.* New York, 1964.
McKean, Hugh. *Louis Comfort Tiffany as I Remember Him.* Winter Park, Florida, 1977.
Mitchell-Tiffany papers. Manuscripts and Archives, Yale University Library.
Newman, Harold. *An Illustrated History of Glass.* London, 1977.
Osterweis, Rollin G. *Three Centuries of New Haven.* New Haven, 1953.
Reynolds, Gary A. *Louis Comfort Tiffany: The Paintings,* catalog of an exhibition, Grey Art Gallery and Study Center. New York University, New York, 1979.
Stebbins, Theodore E., Jr. *American Master Drawings and Watercolors.* New York, 1976.
Yale College yearbooks. Manuscripts and Archives, Yale University Library.

Words of Wisdom by the Distinguished Genealogist Donald Lines Jacobus

April 14, 1923

Mr. F. L. Bennett,

Dear Sir:
I am a little tardy in acknowledging your last letter, and the newspaper article which I read with interest. I am now preparing to move, and after the middle of May my address will be 161 Spring St., West Haven, Conn.

It is probable that I am related to everybody who descends largely from the old families of western Conn. I have never failed to trace a common descent in such cases, whenever I have made any effort at all to find a connection. In addition to the Bristol line, I share a descent with you from John Thomas, John Thompson of East Haven, Benjamin Wilmot, and doubtless others whom I do not readily recall.—By the way, don't be misled if you find the wife of John Thompson of East Haven given as Ellen, as it usually is in printed accounts. John of *New* Haven married Ellen *Harrison*. John of *East* Haven married Dorothy _____, who married (2) a *Harrison*. This has caused confusion, and Ellen has wrongly been assigned to both Johns. Incidentally, I descend from both these Thompson families, but there appears to be no record evidence of a connection between them.

We have (probably) worked out the solution of the Lum problem, but Jonathan (b. 1773) can hardly be assigned the parentage we attribute to him in a *printed genealogy* without more positive proof—though he can definitely be entered as son of Jonathan and _____. I question if Dyer D. Lum had seen the Fairchild wills, *unless* he had been told that Jonathan had been brought up by Fairchild. Otherwise, he would have had no occasion to look up Fairchilds. I only found these wills because I was covering the Probate of *all* the Derby families, and I did not see the significance of the Lum legacies until you brought up the question, when I began studying over it. There may be some other record in existence to prove it—County Court, or Derby or Oxford deeds.

There has been too much shifting of dates, and guesses based on inadequate research, printed in genealogical books. There are cases where it is justifiable to shift dates, but only after the most careful comparison of records proves that there is an actual error. There are 6 or 8 errors in the original New-Haven Vital records which I can *demonstrate* to be careless errors made by the clerk. In one case, a woman's second marriage is placed 10 years too early. The divorce from her first husband occurred *about ten years after* the date of her marriage to her second husband as given (wrongly) in the vital records; actually, she must have married Number 2 shortly after the divorce from Number 1, as the birth of the first child by Number 2 indicates. Then, the marriage of two Tuttle brothers are entered, one under the other, and the careless scribe gave the *same bride* to both brothers, although probate and land records show that one of the brothers married an entirely different woman. But in *publishing* such a record, it should always be stated that the original entry reads so-and-so and is believed to be in error.

A lot of the mistakes in published genealogies are caused by *guessing.* Now guessing is all right so long as it is only theory; a genealogist needs a good imagination, and it is justifiable to make tentative guesses and then follow them up by searching the records to see if they can be proved correct: but it is immoral to publish a *guess* as a *fact.* A man who afterwards employed me on his ancestry had a Clark line looked up by a New York woman—a professional genealogist, and she sent him six generations of Clark ancestry. There was one impossibility in dates in it which aroused his suspicion, and he sent the ancestry to me for verification. Two days' work was enough to prove that *three* assignments of parent-and-child in the *six* generations were wrong; one caused by a misprint in Cothren, the other two by bare-faced guessing on the genealogist's part. This woman—she is now dead—had quite a repute as a genealogist, but she didn't deserve it.

I have recently received a copy of the Utah Genealogical Magazine, a Mormon publication, and it is amusing to find that a man is given 5 wives at once, and 32 children, sometimes as many as 3 children being born in the same year. You know, the Mormons are keen on genealogy, because they perform some kind of Temple rites to save their ancestors' souls, and it is a religious duty to trace their ancestry so as to perform this act of filial piety. If this was part of *every* religion, I could make a better living than I do.

Shall be glad to hear from you any time, but can't write much for a few weeks until moving is over.

Very truly Yours,
Donald L. Jacobus

From the Helen Love Scranton Papers in the Whitney Library of the New Haven Colony Historical Society.

LISTEN, LORD—FROM THE SLUMS

Someone told me that God made the world
  And everything from stone to wood;
And when he had finished it,
  He said that it was good.

He worked on it six long days.
  On the seventh he rested content;
But I have often wondered
  If this is the place he meant.

Men made the slum where I live,
  With its mountains of sin;
They jammed the houses together
  To keep Beauty from entering in.

I often think it is true,
  That real things have never been seen.
'Cause I've lived here all my life
  And never seen grass that was green.

I don't think God made my world,
  'Cause it's misery, not fun.
If he made a beautiful place,
  This couldn't be the one.

Yet someone said that there is a place
  Where the sun shines bright each day;
And that beautiful trees and flowers
  Have been planted along the way.

My days are dark and dreary,
  Yet I often wish I could
See with my own eyes
  The world that God called good.

When I see God, I'll tell him
  That it's the sin which man has hurled
Upon his beautiful earth
  Which has devastated the world.

No longer am I sad, for some day,
  When my eyes close for good,
I'll see in glory
  The world the way I should.

CONSTANCE BAKER in *The Hillhouse Gleam,*
Literary publication of New Haven High School,
New Haven, Ct.

CONSTANCE BAKER MOTLEY
(Mrs. Joel Wilson Motley)

Born in New Haven Sept. 14, 1921
Graduate of N.Y.U. 1943, Graduate N.H.H.S. 1939
Columbia Law School 1946
Member Legal Defense and Education Fund, NAACP, 1945-65
President Borough of Manhattan 1965-66
U.S. District Judge, Southern District, N.Y. 1966

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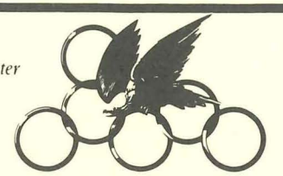

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A long-time friend of the New Haven Colony Historical Society recently furnished generous future support for the Society in this way, transferring capital to the Pooled Income Fund for the eventual benefit of the Society via the New Haven Foundation. He, meanwhile, enjoys the income, while taking advantage of special tax benefits under current IRS regulations.

These benefits can be explained to anyone interested in helping the Society with a future gift of endowment, by myself or Board member Brooks Shepard.

Mrs. Frank C. Hepler
Chairman, Development Committee

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